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September 3, 1997

Mr. Craig Zellar
U S EPA
61 Forsyth St , SW
Atlanta, GA 30303

**RE: Twelvemile Creek/Lake Hartwell
1997 Fish and Sediment Monitoring Report**



Dear Mr. Zellar.

Attached please find one copy of the above referenced report. The 1997 data indicate generally a downward trend in PCB concentration in both fish and sediment. Specifically, in the last two years the PCB concentration in sediment indicates the burial of contaminated sediments by cleaner sediment.

If you have any questions concerning these data, do not hesitate to contact me.

Regards,

Environmental Resources Management

James R. Orr
Senior Scientist

Enclosure
JRO/gsq

c: Butch Younginer
Cliff Kirchof (letter only)

10115925



***LAKE HARTWELL
1997 FISH AND SEDIMENT STUDY
OPERABLE UNIT 2
ROD MONITORING PROGRAM***

***Schlumberger Industries Inc.
Sugar Land, Texas***

August 1997


Project Manager

Reviewed By

Environmental Resources Management
7106 Crossroads Blvd
Suite 228
Brentwood, TN 37027

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I	<i>Fish Analytical Data Lake Hartwell April 1997</i>
II	<i>Sediment Analytical Data Lake Hartwell May 1997</i>
III	<i>Corbicula Analytical Data Lake Hartwell May, 1997</i>
IV	<i>Laboratory Quality Assurance Data 1997</i>

EXECUTIVE SUMMARY

A total of 153 fish samples, represented by largemouth bass, hybrid bass, channel catfish, bluegill, threadfin shad and gizzard shad were collected from six locations in Lake Hartwell during April and May 1996. Fish were analyzed for PCBs by SW-846 Method 8080 with the seven primary Aroclors identified. The locations included Twelvemile Creek (SV-107), Martin Creek (SV-106), Eighteenmile Creek (SV-532), Andersonville Island (SV-535), Tugaloo River (SV-641), and the Lake Hartwell Dam (SV-642).

Standard fillets were taken from large individual fish (largemouth bass, hybrid bass, and channel catfish) and analyzed for PCBs while forage species were analyzed as whole body composites. A standard fillet as defined by the U.S. FDA is a scaled, skin-on fillet that includes the rib cage (skin was removed from the catfish fillets).

Largemouth bass, hybrid bass and channel catfish in Lake Hartwell continue to have PCB concentrations above the USFDA's recommended tolerance level of 2.0 ppm at selected sites. The highest level of contamination continues to occur in the Seneca River Arm of Lake Hartwell in the vicinity of Twelve Mile Creek embayment. At this station (SV-107), largemouth bass and channel catfish had mean total PCB concentrations of 8.66 and 2.68 ppm, respectively. The highest level of PCB in hybrid bass occurred at station SV-532 where the mean total PCB concentration was 4.01 ppm.

Forage fish indicated levels greater than 2.0 ppm in whole body tissues in four of the nine composite samples. The highest concentrations of PCB concentration were detected in gizzard shad at two of the three stations with the mean total PCBs detected at 9.29 ppm at station SV-107. The concentration of PCBs in bluegill at Station SV-107 was 8.4 ppm. The concentration of PCBs was significantly lower from station SV-107 to SV-532 to SV-641 in the forage fish species.

As has been the case since monitoring of the lake began in 1976, there was a decreasing gradient of PCB contamination in largemouth bass and channel catfish from the Twelvemile Creek embayment to the dam. The concentration of PCB in hybrid bass does not indicate as much of a decreasing gradient, because hybrid bass are migratory fish and spend time in various areas of the lake, however, the PCB concentration detected in hybrid bass at station SV-642 was less than the FDA action limit of 2.0 ppm.

The eight-year trend evaluation indicates that PCB concentrations in largemouth bass are declining at SV-107, while remaining relatively similar at the other five sites in the study. Tissue concentrations were above 2.0 ppm at SV-107 and SV-106. Decreases were observed in largemouth bass tissue analysis at stations

SV-107, SV-106, SV-535, and SV-642 over the 1996 values with slight increases observed at the other two stations. The data also indicate that PCB concentrations in channel catfish increased at SV-532 from 1996 to 1997 resulting in two stations with mean values greater than 2.0 ppm. The increase at station SV-532 appears to be the result of one fish with a PCB concentration of 5.15 ppm. The remaining catfish at SV-532 had PCB concentrations similar to historic values of approximately 1.0 ppm. While the PCB concentration in fillets of both species is above 2.0 ppm in the Seneca Arm of Lake Hartwell, the recent data indicate a trend toward declining levels.

Due to the migratory habits of the hybrid bass, increasing or decreasing trends in PCB concentration are generally not observed. However, the 1997 values appeared to be reduced from 1996 particularly at stations SV-106 and SV-642. The concentration at station SV-642 was below 2.0 ppm at a value of 1.21 ppm. This value is the lowest at any station since 1993. Forage fish (bluegill, threadfin shad, and gizzard shad) have been sampled consistently for the past three years 1995-1997. These data indicate a consistent decrease in PCB with distance from the Twelvemile Creek Arm. These data are not sufficient to indicate trends in PCB concentration at each station at this time.

PCB concentrations were analyzed in sediment samples from 21 stations throughout the study area, including the Twelvemile Creek Watershed (six locations) and Lake Hartwell (ten locations in the Twelvemile Creek and Seneca River Arm and five in the main body of the lake). Sediment was sampled as composite samples across the channel at each station with a ponar dredge (sampling approximately the top six inches of sediment) in the lake, while grab samples were collected in the creek stations. Sampling from depositional areas of fine silt material. Both PCB and total organic carbon (TOC) were analyzed from each sample in order to determine the correlation between PCB concentration and organic material in the sediment. The highest concentration of PCBs was detected at station SD-013 (8.60 ppm) the average of the sample and the sample duplicate, 11.0 and 6.19 ppm, respectively. The highest concentration detected in 1996 was also at location SD-013 (8.26 ppm). A total of seven of the 20 locations were lower in PCB concentration during 1997 than 1996 while 13 of the 20 were slightly greater. The PCB concentration tended to decrease in both upstream and downstream directions from SD-013. The SD-013 location is a primary depositional area for fine-grained material within the Twelvemile Creek Arm prior to its confluence with the Keowee River. Station SD-106 also appears to be a depositional area and represents an area where the Seneca River widens, and velocity slows down. The concentrations detected at SD-013 correspond to the levels monitored during the Remedial Investigation (RI), while the concentration of PCBs in sediment at stations in the Upper Twelvemile Creek Arm are lower than levels detected during prior recent sampling. PCB concentration did not correspond to TOC concentration as TOC appears to be highest in the lower

portion of the lake. Future sediment data may be utilized to determine the correlation PCB concentration to TOC at specific stations.

A 28-day *Corbicula* study was conducted at seven locations in the Twelvemile Creek area. Approximately 50 *Corbicula* were placed in baskets at each of the seven locations in Twelvemile Creek and analyzed for PCB following the 28-day incubation period. *Corbicula* from Wolf Creek were used as reference organisms. The concentration of PCBs ranged from 0.425 ppm at the Wolf Creek reference location and upstream control site in Town Creek (C-O) to 8.05 ppm in Twelvemile Creek at the Highway 137 Bridge. The concentration of PCB in *Corbicula* in Town Creek, downstream of the Sangamo Weston facility, was 7.59 ppm, which is down from the 10.1 ppm detected in 1995 but up from the 3.94 ppm detected in 1996.

Although three years of data have been gathered with *Corbicula* PCB levels, specific trends are difficult to interpret with these data. In general, it appears that PCB bioaccumulation becomes lower in a downstream direction from the Sangamo Weston facility and bioaccumulation is very low at Twelvemile Creek upstream of Town Creek, Town Creek upstream of the site, and Wolf Creek.

1.0

INTRODUCTION

During 1976, the South Carolina Department of Health and Environmental Control (SCDHEC) and the United States Environmental Protection Agency (U S EPA) discovered that fish from certain areas of Lake Hartwell (Anderson, Pickens and Oconee Counties) were contaminated with polychlorinated biphenyls (PCBs). This contamination was above the safe tolerance level for consumption of fish by humans (i.e., acceptable) established by the United States Food and Drug Administration (USFDA). Subsequent to these findings, a fish consumption advisory was issued for portions of Lake Hartwell as a conservative measure to reduce human exposure.

The SCDHEC has conducted yearly studies in Lake Hartwell since 1976 to evaluate the level of PCB contamination in fish. The primary focus of these studies has been to gather current PCB data for yearly updates in the fish consumption advisory. Annual results are available through 1993. During 1990, portions of Lake Hartwell became eligible for Superfund clean-up funds under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. As a part of the June 1994 Final Record of Decision (ROD), aquatic biota monitoring and sediment sampling were required. The aquatic biota monitoring primarily includes a comprehensive fish tissue study which involves fish tissue sampling similar to the historic annual monitoring by the SCDHEC.

Summarized in this report are the results of the 1997 fish tissue, *Corbicula*, and sediment study of Lake Hartwell. In addition, the fish tissue data collected by the State of South Carolina, Savannah District Corps of Engineers, and ERM from 1990 to present are compared to identify trends.

2.0

METHODS

Fish, sediment, and *Corbicula* sampling was conducted in accordance with the procedures prescribed in the Final Record of Decision dated June 1994, and in coordination with SCDHEC, the Savannah District Corps of Engineers and U S EPA Region IV. Mr. Butch Younginer of SCDHEC and Mr. Mike Alexander of the Savannah COE were notified prior to sampling. Representatives from either agency did not request to participate in the sampling. Fish selected included largemouth bass (*Micropterus salmoides*), hybrid bass (*Morone sp.*), channel catfish (*Ictalurus punctatus*), bluegill (*Lepomis macrochirus*), gizzard shad (*Dorosoma cepedianum*) and threadfin shad (*Dorosoma petenense*). A total of three striped bass (*Morone saxatilis*) were substituted for hybrid bass due to lack of an adequate size of hybrid bass at some stations.

Fish were collected by electrofishing and gill netting techniques. Fish were kept on wet ice from the time of sample collection to dissection. After sample collection, fish weight (g) and length (mm) were measured and recorded in a log book prior to fillet collection. Data recorded for each sample included species, location, weight, length, date, sex, grab or composite sample type and sample number. Fillets were collected with a pre-cleaned stainless steel fillet knife.

Prior to fillet sampling, fish were placed on a table covered with clean sheets of aluminum foil. Foil was changed between fish species and stations. All fillets and whole fish samples were wrapped in aluminum foil (dull side to the tissue), placed in a zip-lock or plastic bag, labeled and placed on ice. Samples were sent to the analytical laboratory on wet ice, rather than frozen, to facilitate sample preparation and reduce sample handling. Fat deposits and viscera were removed from each fillet rib cage with the fillet knife prior to wrapping of the sample. Sample collection was conducted in the field at various sample locations. The sampling equipment was decontaminated with detergent wash, deionized water rinse, pesticide grade isopropanol rinse, and deionized water rinse between each species and station. An equipment rinse blank and trip blank sample were collected once in every 20 samples. One in ten samples were identified for duplicate analysis with the duplicate sample split from the sample in the laboratory after grinding. The size class range of fish collected was as follows:

largemouth bass	1.5-3.0 lbs (682-1,364 g)
channel catfish	2.0-4.0 lbs (910-1,818 g)
hybrid bass	3.0-5.0 lbs (1,364-2,273 g)
bluegill	3-5 inches (76-127 mm)
gizzard shad	>12 inches (>305 mm)
threadfin shad	>3 inches (>76 mm)

Fish were sent overnight by Federal Express to Northeast Analytical Laboratory Services (NEA) in Schenectady, New York, a South Carolina-certified laboratory. Sufficient ice was placed with the fish samples, such that they were received at 4° centigrade.

Sediment samples were collected with a petite ponar dredge. The dredge has an opening of six inches by six inches and, in soft sediments, will collect to a depth of approximately six inches. Five grab samples were collected across the channel (typically bank to bank) at each open water location with individual grab samples collected in the Twelvemile Creek stream locations. Composite samples were thoroughly mixed in an aluminum container prior to sampling with a clean stainless steel spoon. Each sample consisted of two four-ounce glass jars. Samples were immediately placed on ice through sample delivery.

The ponar, aluminum container used for mixing the composite samples, and stainless steel spoons were decontaminated between sample locations by use of a detergent wash, deionized rinse pesticide grade isopropanol rinse and deionized rinse. An equipment rinse blank and trip blank were collected each day with the sediment samples and two duplicates collected for a total of 23 sediment samples. Samples were shipped on ice overnight to NEA. Both fish and sediment samples were analyzed by SW-846 Method 8080 Polychlorinated Biphenyls.

A total of seven sample locations were utilized for the analysis of bioconcentration of PCBs in *Corbicula* tissue. Reference organisms were collected from Wolf Creek and transported the same day to the other test locations.

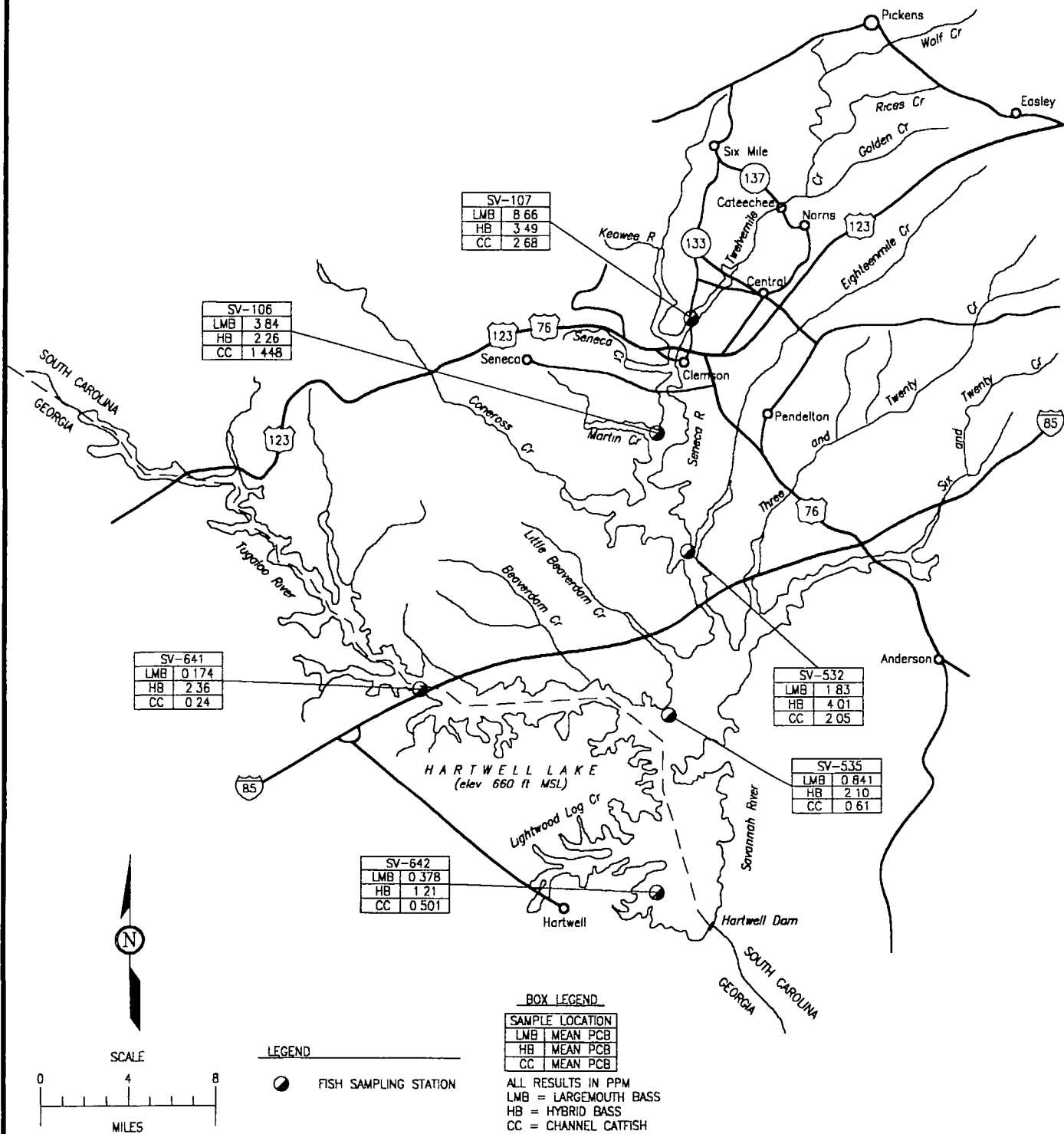
Corbicula from Wolf Creek were utilized because of the lack of PCBs detected at this location in 1995 and 1996, the great abundance of *Corbicula* at this location, and to reduce the handling time which is believed to have resulted in a number of mortalities during 1995. *Corbicula* were retrieved after 28-days of incubation (April 23 through May 21, 1997), placed in labeled plastic bags, and the bags placed directly on ice. All baskets were collected from each site with few mortalities noted.

Organisms were transported to the ERM laboratory on ice for dissection. Approximately 30 grams of tissue was collected from each location. Samples were shipped to NEA for analyses.

3.0 RESULTS

3.1 FISH

Sampling locations were selected to coincide with previous Lake Hartwell sample collections. The six fish tissue sampling locations are depicted on Figure 1. Also illustrated in Figure 1 are the mean PCB concentrations in three fish species sampled during 1996. Figures 2 and 3 depict the sediment sample locations in Lake Hartwell and the Twelvemile Creek watershed, respectively. Included in Figures 2 and 3 are the PCB concentrations detected during the 1997 sampling period. Provided in Table 1 is the summary of the 1997 Fish Tissue Study results with the analytical data sheets provided in Attachment 1. Included in Table 1 are the sample number, date of sample, species sampled, length, weight, sex and PCB concentration. The breakdown of the specific Aroclors for each fish sample are summarized in Table 2. These data indicated the presence of Aroclor 1254 and 1260. Presented in Table 3 are the PCB concentrations in each largemouth bass collected from each location, as well as the mean and standard deviation for each station. The mean data are also graphically depicted on this table to illustrate the



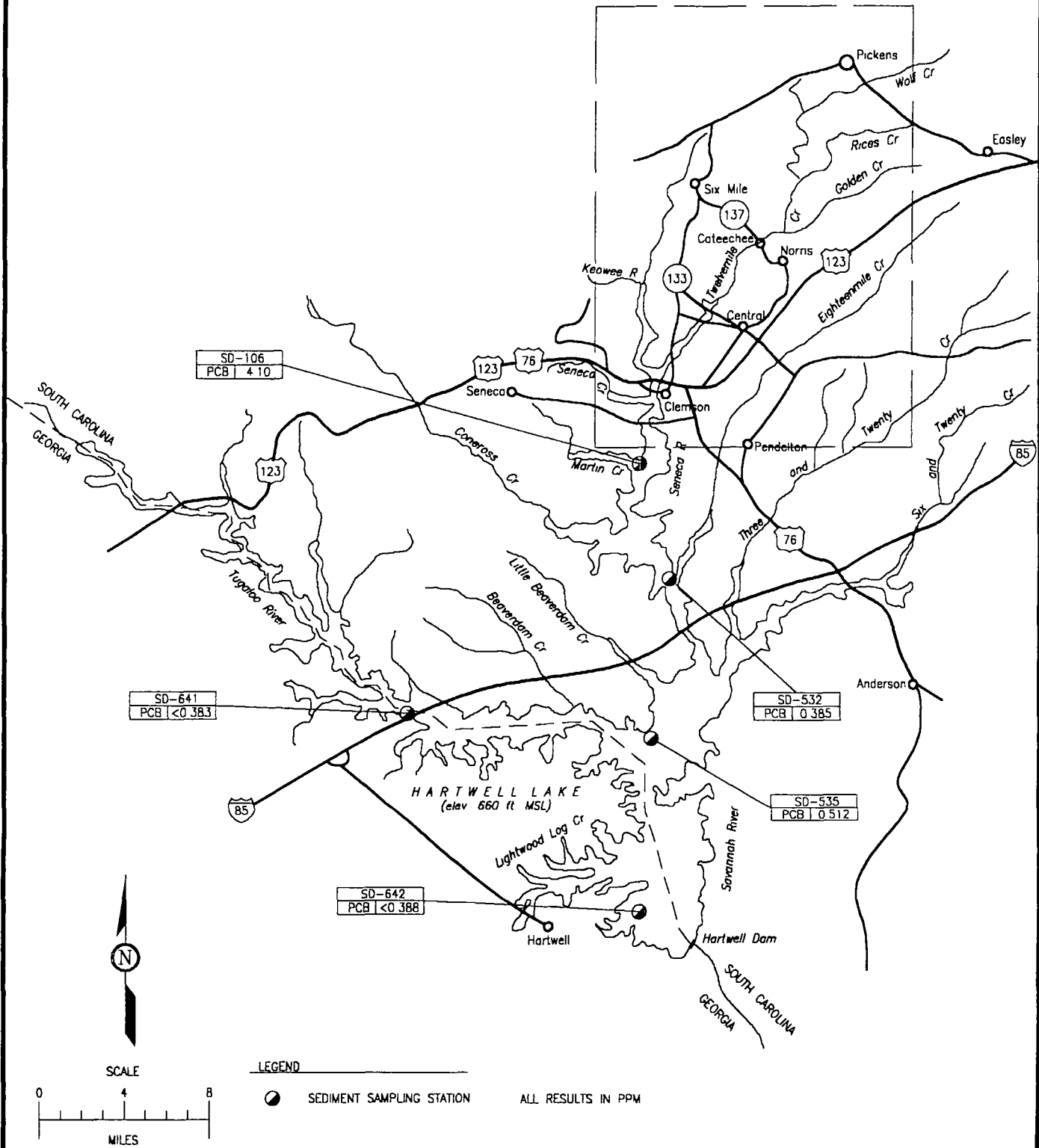
ERM-Southeast, Inc.
Brentwood, Tennessee

FISH SAMPLING STATIONS IN LAKE HARTWELL SHOWING PCB ANALYTICAL RESULTS FOR 1997 OU2 FISH STUDY

FIGURE

1

TWELVEMILE CREEK AREA RESULTS SHOWN IN FIGURE 3



FIGURE

2



ERM-Southeast, Inc.
Brentwood, Tennessee

SEDIMENT SAMPLING LOCATIONS IN
LAKE HARTWELL SHOWING PCB ANALYTICAL
RESULTS FOR 1997 OU2 FISH STUDY



ERM-Southeast, Inc.
Brentwood, Tennessee

SEDIMENT SAMPLING LOCATIONS IN TWELVEMILE CREEK SHOWING PCB ANALYTICAL RESULTS FOR 1997 OU2 FISH STUDY

FIGURE

3

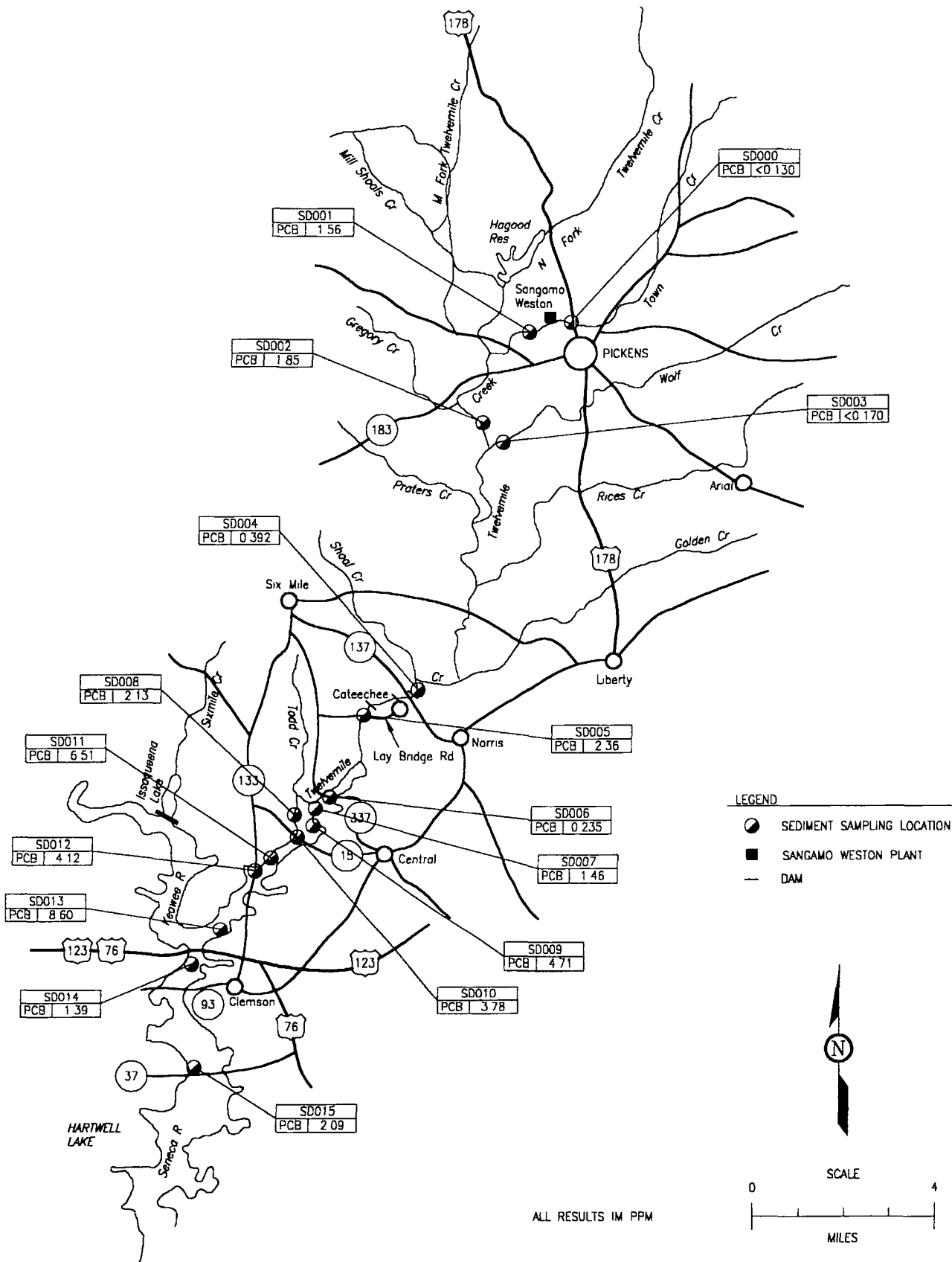


TABLE 1

**OU2 FISH STUDY - FIELD DATA AND TOTAL PCB RESULTS
SPRING 1997**

**Schlumberger Industries, Inc.
Sugar Land, Texas**

Sample Number	Date	Species	Length (mm)	Weight (grams)	Sex	Total PCB (µg/g)
SV-107-01	4/15/97	bg	129-181	604	u	8.4
SV-107-02	4/15/97	ts	84-93	77.3	u	4.9
SV-107-03	4/15/97	lmb	361	1050	f	5.95
SV-107-04	4/15/97	lmb	385	800	m	6.35
SV-107-05	4/15/97	lmb	335	550	m	3.76
SV-107-06	4/15/97	lmb	475	1200	f	3.902/3.77 d
SV-107-07	4/24/97	lmb	370	650	m	11.61
SV-107-08	4/15/97	lmb	365	650	f	12.55
SV-107-09	4/15/97	lmb	400	950	f	18.44
SV-107-10	4/15/97	lmb	380	750	f	9.22
SV-107-11	4/24/97	lmb	360	600	m	8.561
SV-107-12	4/15/97	lmb	425	950	f	6.347
SV-107-13	4/15/97	hb	460	1500	m	1.695
SV-107-14	4/15/97	hb	455	1350	m	1.904
SV-107-15	4/15/97	hb	455	1400	m	2.503
SV-107-16	4/15/97	hb	550	2650	f	6.67
SV-107-17	4/15/97	hb	440	1500	f	0.821
SV-107-18	4/15/97	hb	440	1550	m	3.735/5.02 d
SV-107-19	4/15/97	hb	575	2350	m	9.12
SV-107-20	4/15/97	hb	445	1300	m	2.784
SV-107-21	4/15/97	hb	475	1600	m	3.251
SV-107-22	4/15/97	hb	480	1650	f	1.049
SV-107-23	4/15/97	gs	3275	300-580	u	9.29
SV-107-24	4/15/97	cc	415	700	f	3.363
SV-107-25	4/16/97	cc	400	650	m	3.47
SV-107-26	4/16/97	cc	380	500	f	1.59
SV-107-27	4/16/97	cc	415	600	f	2.31

lmb - Largemouth Bass
hb - Hybrid Bass
cc - Channel Catfish
ts - Threadfin Shad
gs - Gizzard Shad
bg - Bluegill

f - Female
m - Male
u - Unknown
a - Combined Average
t - Combined Total
d - Duplicate

TABLE 1

**OU2 FISH STUDY - FIELD DATA AND TOTAL PCB RESULTS
SPRING 1997**

**Schlumberger Industries, Inc.
Sugar Land, Texas**

Sample Number	Date	Species	Length (mm)	Weight (grams)	Sex	Total PCB (µg/g)
SV-106-01	4/15/97	lmb	370	650	m	4.474
SV-106-02	4/15/97	lmb	410	950	m	4.131/4.92 d
SV-106-03	4/15/97	lmb	385	700	f	2.982
SV-106-04	4/15/97	lmb	360	600	m	1.997
SV-106-05	4/15/97	lmb	395	800	m	11.21
SV-106-06	4/15/97	lmb	405	850	f	3.908
SV-106-07	4/15/97	lmb	420	1000	f	3.039
SV-106-08	4/15/97	lmb	360	600	f	2.731
SV-106-09	4/15/97	lmb	360	600	m	1.913
SV-106-10	4/24/97	lmb	355	615	m	1.907
SV-106-11	4/15/97	hb	600	2600	f	1.817
SV-106-12	4/15/97	hb	540	2100	f	2.18
SV-106-13	4/15/97	hb	460	1500	m	2.69
SV-106-14	4/15/97	hb	475	1700	f	1.599/1.48 d
SV-106-15	4/15/97	hb	430	1300	m	1.913
SV-106-16	4/15/97	hb	465	1700	f	2.19
SV-106-17	4/15/97	hb	460	1450	m	2.789
SV-106-18	4/15/97	hb	435	1250	m	2.74
SV-106-19	4/15/97	hb	485	1800	f	2.67
SV-106-20	4/24/97	hb	550	2900	f	2.028
SV-106-21	4/15/97	cc	395	600	m	0.939
SV-106-22	5/21/97	cc	444	760	f	1.806
SV-106-23	5/21/97	cc	435	760	f	1.705
SV-106-24	5/21/97	cc	445	840	m	1.342

lmb - Largemouth Bass
hb - Hybrid Bass
cc - Channel Catfish
ts - Threadfin Shad
gs - Gizzard Shad
bg - Bluegill

f - Female
m - Male
u - Unknown
a - Combined Average
t - Combined Total
d - Duplicate

TABLE 1

**OU2 FISH STUDY - FIELD DATA AND TOTAL PCB RESULTS
SPRING 1997**

**Schlumberger Industries, Inc.
Sugar Land, Texas**

Sample Number	Date	Species	Length (mm)	Weight (grams)	Sex	Total PCB (µg/g)
SV-532-01	4/15/97	cc	420	800	f	5.152
SV-532-02	4/16/97	bg	114-173	459	u	0.931
SV-532-03	4/16/97	ts	66-91	60	u	1.5
SV-532-04	4/16/97	lmb	325	750	f	1.65
SV-532-05	4/16/97	lmb	360	650	f	1.74
SV-532-06	4/16/97	lmb	390	900	m	0.451
SV-532-07	4/16/97	lmb	425	1000	f	2.723
SV-532-08	4/16/97	lmb	405	950	f	4.573
SV-532-09	4/16/97	lmb	415	850	f	0.603
SV-532-10	4/16/97	lmb	355	600	f	1 05
SV-532-11	4/16/97	lmb	360	600	f	1 473
SV-532-12	4/24/97	lmb	365	700	f	0 714
SV-532-13	4/16/97	lmb	445	1250	f	3.36
SV-532-14	4/16/97	cc	405	750	f	0.819
SV-532-15	4/16/97	cc	440	800	m	1.16
SV-532-16	4/16/97	hb	460	1700	f	7 61/6.77 d
SV-532-17	4/16/97	hb	440	1400	m	3.51
SV-532-18	4/16/97	hb	420	1300	f	2.39
SV-532-19	4/16/97	hb	455	1250	f	6.66
SV-532-20	4/16/97	hb	460	1800	f	2.161/2.15 d
SV-532-21	4/16/97	hb	450	1350	m	9 4
SV-532-22	4/16/97	hb	460	1850	m	1.734
SV-532-23	4/24/97	hb	480	1900	f	1 721
SV-532-24	4/24/97	hb	475	1650	f	1 923
SV-532-25	4/16/97	hb	450	1500	m	3.41
SV-532-26	4/16/97	cc	380	650	f	1 01/1 09 d
SV-532-27	4/16/97	gs	305-350	350-550	u	3.76

lmb - Largemouth Bass
hb - Hybrid Bass
cc - Channel Catfish
ts - Threadfin Shad
gs - Gizzard Shad
bg - Bluegill

f - Female
m - Male
u - Unknown
a - Combined Average
t - Combined Total
d - Duplicate

TABLE 1

**OU2 FISH STUDY - FIELD DATA AND TOTAL PCB RESULTS
SPRING 1997**

**Schlumberger Industries, Inc.
Sugar Land, Texas**

Sample Number	Date	Species	Length (mm)	Weight (grams)	Sex	Total PCB (µg/g)
SV-535-01	4/16/97	hb	425	1200	f	0.79
SV-535-02	4/16/97	hb	440	1300	m	1.00
SV-535-03	4/16/97	hb	555	2150	f	1.76
SV-535-04	4/16/97	hb	420	1580	m	2.89
SV-535-05	4/16/97	hb	465	1500	f	1.386
SV-535-06	4/16/97	lmb	475	1550	f	0.683
SV-535-07	4/16/97	lmb	370	750	m	0.715
SV-535-08	4/16/97	lmb	395	850	f	0.427
SV-535-09	4/16/97	lmb	355	600	f	0.301
SV-535-10	4/16/97	lmb	420	950	f	0.973
SV-535-11	4/16/97	lmb	390	900	f	2.371
SV-535-12	4/16/97	lmb	390	850	f	1.439
SV-535-13	4/16/97	lmb	350	700	m	0.24
SV-535-14	4/16/97	lmb	380	900	f	0.656
SV-535-15	4/16/97	lmb	365	900	f	0.607
SV-535-16	4/16/97	cc	455	850	f	0.742/0.420 d
SV-535-17	4/16/97	cc	415	750	f	0.522
SV-535-18	4/16/97	cc	440	750	m	0.854
SV-535-19	4/16/97	cc	470	900	f	0.495
SV-535-20	4/17/97	hb	450	1400	f	0.503
SV-535-21	4/17/97	hb	450	1550	f	3.32
SV-535-22	4/17/97	hb	470	1550	f	0.756/0.803 d
SV-535-23	4/17/97	hb	460	1300	f	0.962
SV-535-24	4/25/97	sb	465	1350	m	7.59

lmb - Largemouth Bass
hb - Hybrid Bass
cc - Channel Catfish
ts - Threadfin Shad
gs - Gizzard Shad
sb - Striped Bass

f - Female
m - Male
u - Unknown
a - Combined Average
t - Combined Total
d - Duplicate

TABLE 1

**OU2 FISH STUDY - FIELD DATA AND TOTAL PCB RESULTS
SPRING 1997**

**Schlumberger Industries, Inc.
Sugar Land, Texas**

Sample Number	Date	Species	Length (mm)	Weight (grams)	Sex	Total PCB (µg/g)
SV-641-01	4/17/97	hb	460	1500	f	0.596
SV-641-02	4/17/97	hb	455	1400	f	1.358
SV-641-03	4/17/97	hb	570	2200	m	3.13
SV-641-04	4/17/97	hb	520	1950	m	3.15/3.08 d
SV-641-05	4/17/97	hb	450	1300	m	2.436
SV-641-06	4/17/97	hb	450	1550	m	2.517
SV-641-07	4/17/97	hb	460	1600	f	1.12
SV-641-08	4/17/97	hb	470	1500	m	1.53
SV-641-09	4/17/97	hb	470	1600	f	1.361
SV-641-10	4/17/97	cc	520	1500	f	0.161
SV-641-11	4/17/97	cc	410	600	f	0.21
SV-641-12	4/17/97	cc	410	600	f	0.534
SV-641-13	4/17/97	cc	460	900	f	<0.111
SV-641-14	4/16/97	lmb	390	700	m	0.112
SV-641-15	4/16/97	lmb	410	900	m	0.35/0.297 d
SV-641-16	4/16/97	lmb	370	600	m	<0.111
SV-641-17	4/16/97	lmb	370	650	m	<0.102
SV-641-18	4/16/97	lmb	410	850	m	0.461
SV-641-19	4/16/97	lmb	350	550	m	0.141
SV-641-20	4/16/97	lmb	380	700	m	0.311
SV-641-21	4/16/97	lmb	360	600	m	<0.107
SV-641-22	4/16/97	lmb	340	550	m	<0.107
SV-641-23	4/18/97	lmb	320	500	m	<0.109
SV-641-24	4/16/97	gs	280-320	300-400	u	0.487
SV-641-25	4/18/97	ts	92-120	100	u	<0.110
SV-641-26	4/18/97	ts	100-175	350	u	<0.106
SV-641-27	4/25/97	hb	515	1710	f	6.47

lmb - Largemouth Bass
hb - Hybrid Bass
cc - Channel Catfish
ts - Threadfin Shad
gs - Gizzard Shad
bg - Bluegill

f - Female
m - Male
u - Unknown
a - Combined Average
t - Combined Total
d - Duplicate

TABLE 1

**OU2 FISH STUDY - FIELD DATA AND TOTAL PCB RESULTS
SPRING 1997**

**Schlumberger Industries, Inc.
Sugar Land, Texas**

Sample Number	Date	Species	Length (mm)	Weight (grams)	Sex	Total PCB (µg/g)
SV-642-01	4/17/97	hb	550	2600	f	4.182
SV-642-02	4/17/97	hb	450	1250	f	0.819
SV-642-03	4/17/97	hb	470	1450	f	1.682
SV-642-04	4/17/97	sb	490	1500	m	1.1/1.05 d
SV-642-05	4/17/97	sb	440	1150	m	0.886
SV-642-06	4/17/97	hb	460	1250	f	0.645
SV-642-07	4/17/97	cc	400	550	f	0.705
SV-642-08	4/17/97	lmb	395	700	f	0.126
SV-642-09	4/17/97	lmb	410	850	f	0.227
SV-642-10	4/17/97	lmb	350	550	m	0.16
SV-642-11	4/17/97	lmb	330	550	m	0.189
SV-642-12	4/17/97	lmb	410	950	m	0.662/0.663 d
SV-642-13	4/17/97	lmb	370	700	m	0.532
SV-642-14	4/17/97	lmb	370	700	f	0.558
SV-642-15	4/17/97	lmb	350	600	m	0.25
SV-642-16	4/17/97	lmb	380	750	m	0.357
SV-642-17	4/17/97	lmb	360	550	f	<0.109
SV-642-18	4/18/97	cc	410	800	f	0.889
SV-642-19	4/18/97	cc	425	700	f	<0.110
SV-642-20	4/18/97	cc	470	950	f	0.356
SV-642-21	4/18/97	hb	470	1600	f	0.81
SV-642-22	4/18/97	hb	440	1350	f	0.544
SV-642-23	4/18/97	hb	455	1400	f	0.902
SV-642-24	4/18/97	hb	475	1700	f	0.546

lmb - Largemouth Bass
hb - Hybrid Bass
cc - Channel Catfish
ts - Threadfin Shad
gs - Gizzard Shad

f - Female
m - Male
u - Unknown
d - Duplicate
t - Combined Total
sb - Striped Bass

TABLE 2

**OU2 FISH STUDY - AROCLOR AND TOTAL PCB RESULTS
SPRING 1997**

**Schlumberger Industries, Inc.
Sugar Land, Texas**

Sample Number	Date Sampled	Aroclor Identification- ug/g								Total PCB - $\mu\text{g/g}$
		1016	1221	1232	1242	1248	1254	1260		
SV-106-01	4/15/97	<0 323	<0 323	<0 323	<0 323	<0 323	3 76	0 714	4 474	
SV-106-02	4/15/97	<0 317	<0 317	<0 317	<0 317	<0 317	3 40	0 731	4 131	
SV-106-02 Dup	4/15/97	<0 329	<0 329	<0 329	<0 329	<0 329	3 88	1 04	4 92	
	4/15/97	<0 223	<0 223	<0 223	<0 223	<0 223	2 36	0 622	2 982	
SV-106-04	4/15/97	<0 107	<0 107	<0 107	<0 107	<0 107	1 68	0 317	1 997	
SV-106-05	4/15/97	<1 10	<1 10	<1 10	<1 10	<1 10	9 67	1 54	11 21	
SV-106-06	4/15/97	<0 324	<0 324	<0 324	<0 324	<0 324	3 27	0 638	3 908	
SV-106-07	4/15/97	<0 212	<0 212	<0 212	<0 212	<0 212	2 25	0 789	3 039	
SV-106-08	4/15/97	<0 222	<0 222	<0 222	<0 222	<0 222	2 35	0 381	2 731	
SV-106-09	4/15/97	<0 105	<0 105	<0 105	<0 105	<0 105	1 26	0 653	1 913	
SV-106-10	4/24/97	<0 217	<0 217	<0 217	<0 217	<0 217	1 61	0 297	1 907	
SV-106-11	4/15/97	<0 112	<0 112	<0 112	<0 112	<0 112	1 37	0 447	1 817	
SV-106-12	4/15/97	<0 112	<0 112	<0 112	<0 112	<0 112	1 70	0 480	2 18	
SV-106-13	4/15/97	<0 110	<0 110	<0 110	<0 110	<0 110	2 10	0 590	2 69	
SV-106-14	4/15/97	<0 109	<0 109	<0 109	<0 109	<0 109	1 2	0 399	1 599	
SV-106-14 Dup	4/15/97	<0 106	<0 106	<0 106	<0 106	<0 106	1 13	0 349	1 48	
	4/15/97	<0 110	<0 110	<0 110	<0 110	<0 110	1 55	0 363	1 913	
SV-106-16	4/15/97	<0 111	<0 111	<0 111	<0 111	<0 111	1 80	0 390	2 19	
SV-106-17	4/15/97	<0 208	<0 208	<0 208	<0 208	<0 208	2 18	0 609	2 789	
SV-106-18	4/15/97	<0 111	<0 111	<0 111	<0 111	<0 111	1 72	1 02	2 74	
SV-106-19	4/16/97	<0 110	<0 110	<0 110	<0 110	<0 110	2 05	0 620	2 67	
SV-106-20	4/24/97	<0 324	<0 324	<0 324	<0 324	<0 324	1 62	0 408	2 028	
SV-106-21	4/16/97	<0 112	<0 112	<0 112	<0 112	<0 112	0.694	0 245	0 939	
SV-106-22	5/21/97	<0 112	<0 112	<0 112	<0 112	<0 112	1 46	0 346	1 806	
SV-106-23	5/21/97	<0 107	<0 107	<0 107	<0 107	<0 107	1 49	0 215	1 705	
SV-106-24	5/21/97	<0 110	<0 110	<0 110	<0 110	<0 110	1 12	0 222	1 342	

TABLE 3

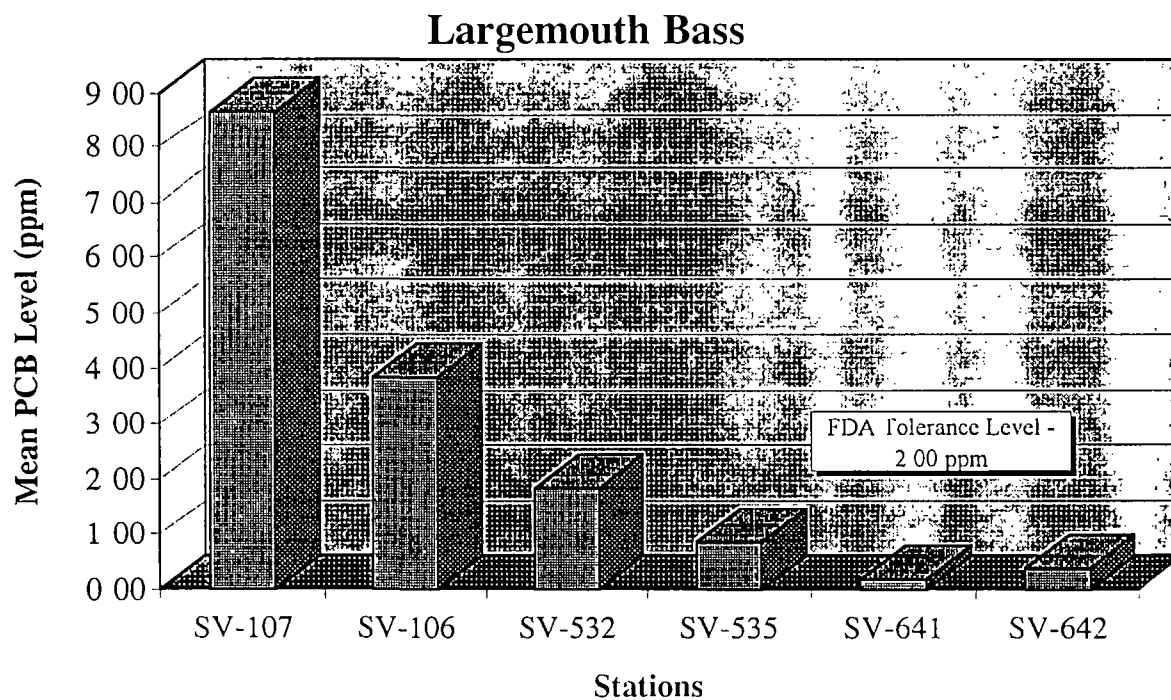
**1997 LAKE HARTWELL OU2 FISH STUDY
TOTAL PCB CONCENTRATIONS (ppm)
IN LARGEMOUTH BASS FILLETS**

Schlumberger Industries, Inc.
Sugar Land, Texas

Replicate Number	Sample					
	SV-107	SV-106	SV-532	SV-535	SV-641	SV-642
01	5.95	4.474	1.65	0.683	0.112	0.126
02	6.35	4.131/4.92d	1.74	0.715	0.35/0.297d	0.227
03	3.76	2.982	0.451	0.427	0.056*	0.160
04	3.902/3.77d	1.997	2.723	0.301	0.051*	0.189
05	11.61	11.21	4.573	0.973	0.461	0.662/0.663d
06	12.55	3.908	0.603	2.371	0.141	0.532
07	18.44	3.039	1.05	1.439	0.311	0.558
08	9.22	2.731	1.473	0.24	0.054*	0.25
09	8.561	1.913	0.714	0.656	0.054*	0.357
10	6.347	1.907	3.36	0.607	0.055*	0.055*
Mean	8.66	3.84	1.83	0.841	0.174	0.378
Std. Dev.	4.81	2.76	1.34	0.64	0.153	0.207

*One half of the detection limit is used for the averaging value

d = duplicate



trends in mean concentration between stations. Similar information is presented in Tables 4 and 5 for hybrid bass and channel catfish, respectively. These data are summarized for bluegill, threadfin shad and gizzard shad in Table 6.

The PCB concentration exceeded the 2.0 ppm FDA tolerance level in largemouth bass fillets at two of the six locations. The mean values at stations SV-107 and SV-106 were 8.66 ppm and 3.84 ppm, respectively. The PCB concentration was less than 0.5 ppm at stations SV-641 and SV-642. The 2.0 ppm FDA limit was exceeded in five of the six stations by hybrid bass fillets. The maximum mean value was detected at SV-532, at 4.9 ppm, and the lowest mean value was detected at the station nearest the dam, Station SV-642, at 1.21 ppm. This is the lowest concentration detected in hybrid bass since 1993. The FDA limit was exceeded at SV-107 and SV-532 in catfish fillets with mean values of 2.68 ppm and 2.05 ppm, respectively. The PCB concentration in all other locations was less than 2.0 ppm in catfish fillets. The mean PCB concentration in whole tissue samples of forage fish (Table 6) indicates various degrees of bioaccumulation. Similar to previous studies, the concentration detected in gizzard shad was higher than in either bluegill or threadfin shad, with a maximum of 9.3 ppm detected at SV-107. The concentration of PCBs in bluegill at SV-107 was 8.4 ppm. The PCB concentration was less than 2.0 ppm in five of the nine forage fish samples and less than 1.0 ppm for all species at station SV-641. The PCB concentration was lower in each forage fish species with distance from the Twelvemile Creek Arm of Lake Hartwell.

The PCB concentrations detected in the 1997 fish study were compared to historic data dating from 1990 to present. Illustrated in Figures 4 through 6 are the trends in PCB concentration of fish fillets for largemouth bass, hybrid bass and channel catfish, respectively. Each figure depicts the trend of PCB concentration for each of the six locations sampled. The 2.0 ppm FDA limit was consistently exceeded in largemouth bass fillets (Figure 4) from two stations, SV-107 and SV-106, during this seven-year period. A single exceedance was reported at station SV-532 during 1994. No exceedances in largemouth bass near PCB concentrations have been reported at stations SV-535, SV-641 and SV-642 from 1990 to 1997. Distinct trends over time were not observed in the data in the lower four stations (where concentrations were generally below 2.0 ppm) while generally lower concentrations of PCBs were detected at SV-107 and SV-106 from 1990 to present. One exception was the concentration detected at SV-107 (8.66 ppm) during 1997 which, similar to the concentration detected in 1996 was elevated over the concentration detected the previous four years. The concentrations detected in 1996 and 1997 however, were less than the concentrations detected in 1990 and 1991. This is believed to be reflective of an overall decrease in PCB due to natural degradation.

TABLE 4

**1997 LAKE HARTWELL OU2 FISH STUDY
TOTAL PCB CONCENTRATIONS (ppm) IN HYBRID BASS FILLETS**

Schlumberger Industries, Inc.
Sugar Land, Texas

Replicate Number	Sample					
	SV-107	SV-106	SV-532	SV-535	SV-641	SV-642
01	1.695	1.817	7.61/6.77d	0.79	0.596	4.182
02	1.904	2.18	3.51	1	1.358	0.819
03	2.503	2.69	2.39	1.76	3.13	1.682
04	6.67	1.599/1.48d	6.66	2.89	3.15/3.08d	1.1/1.05d
05	0.821	1.913	2.161/2.15d	1.386	2.436	0.886
06	3.735/5.02d	2.19	9.40	0.503	2.517	0.645
07	9.12	2.789	1.734	3.32	1.12	0.81
08	2.784	2.74	1.721	0.756/0.803d	1.53	0.544
09	3.251	2.67	1.923	0.962	1.361	0.902
10	1.049	2.028	3.41	7.59	6.47	0.546
Mean	3.49	2.26	4.01	2.10	2.36	1.21
Std. Dev.	2.79	0.44	2.7	2.14	1.7	1.09

Note Replicate 10 for SV-535 and replicates 04 and 05 for SV-642 were striped bass, not hybrid bass.

d = duplicate

Hybrid Bass

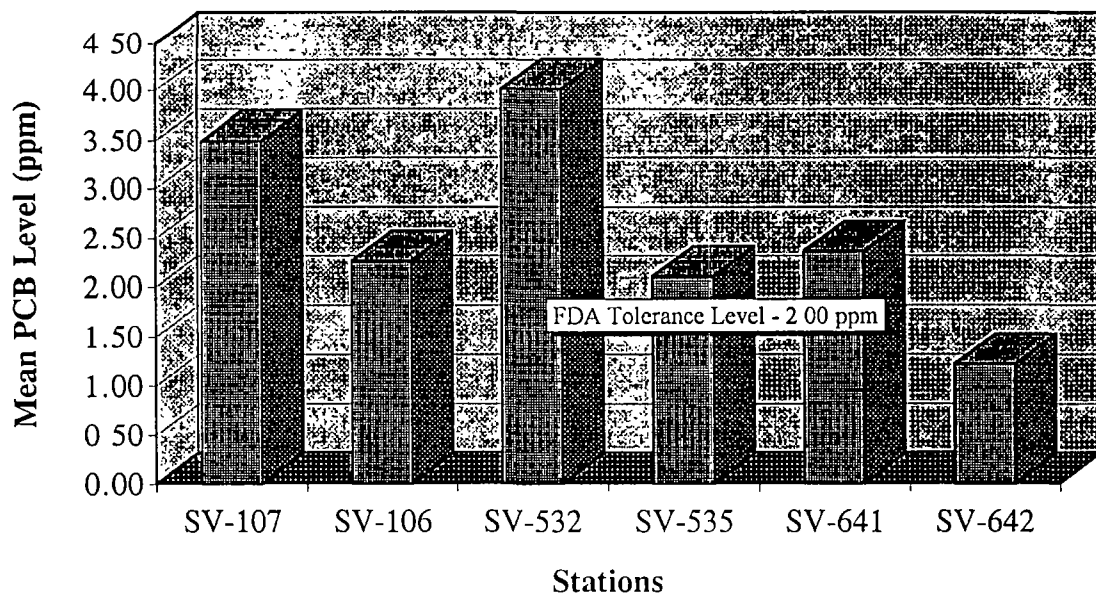


TABLE 5

**1997 LAKE HARTWELL OU2 FISH STUDY
TOTAL PCB CONCENTRATIONS (ppm) IN CHANNEL CATFISH FILLETS**

Schlumberger Industries, Inc.
Sugar Land, Texas

Replicate Number	Station					
	SV-107	SV-106	SV-532	SV-535	SV-641	SV-642
01	3.363	0.939	5.15	0.742/0.420d	0.161	0.705
02	3.47	1.806	0.819	0.522	0.21	0.889
03	1.6	1.705	1.16	0.854	0.534	0.055*
04	2.31	1.342	1.01/1.09d	0.495	0.056*	0.356
Mean	2.68	1.448	2.05	0.61	0.24	0.501
Std. Dev.	0.90	0.394	2.08	0.16	0.206	0.37

d = duplicate

*One half of the detection limit is used for the averaging value.

Channel Catfish

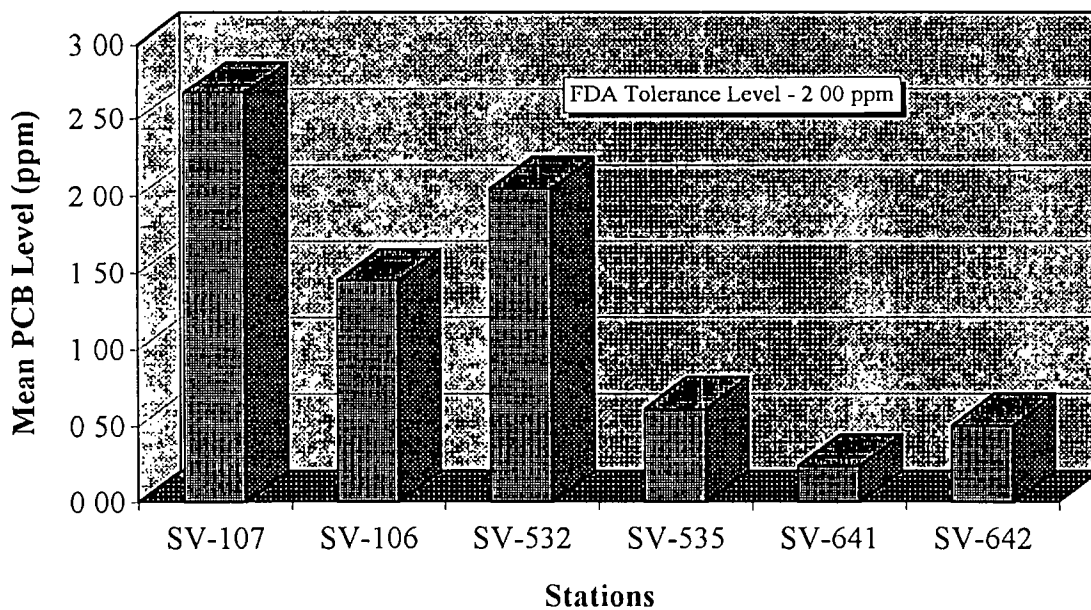


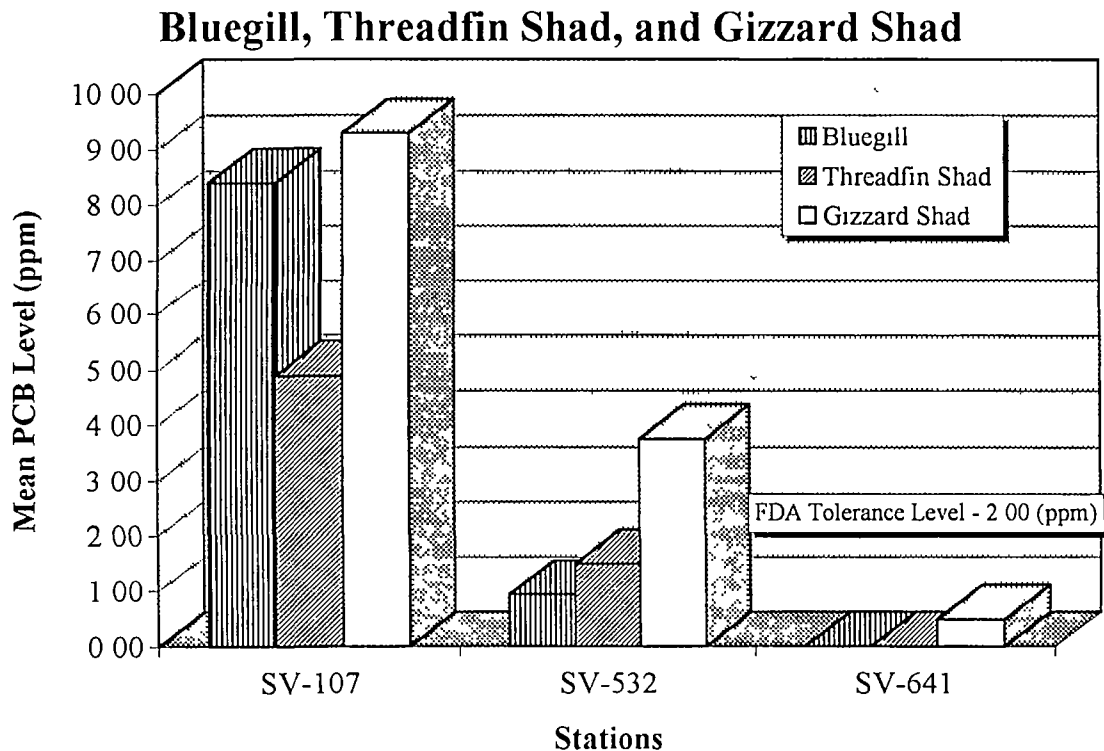
TABLE 6

**1997 LAKE HARTWELL OU2 FISH STUDY
TOTAL PCB CONCENTRATIONS (ppm) IN BLUEGILL,
THREADFIN SHAD, AND GIZZARD SHAD COMPOSITES**

Schlumberger Industries, Inc.
Sugar Land, Texas

Species Composite	Station					
	SV-107	SV-106	SV-532	SV-535	SV-641	SV-642
Bluegill	8.4	NA	0.931	NA	<0.106	NA
Threadfin Shad	4.9	NA	1.50	NA	<0.110	NA
Gizzard Shad	9.3	NA	3.76	NA	0.487	NA

d = duplicate



Largemouth Bass

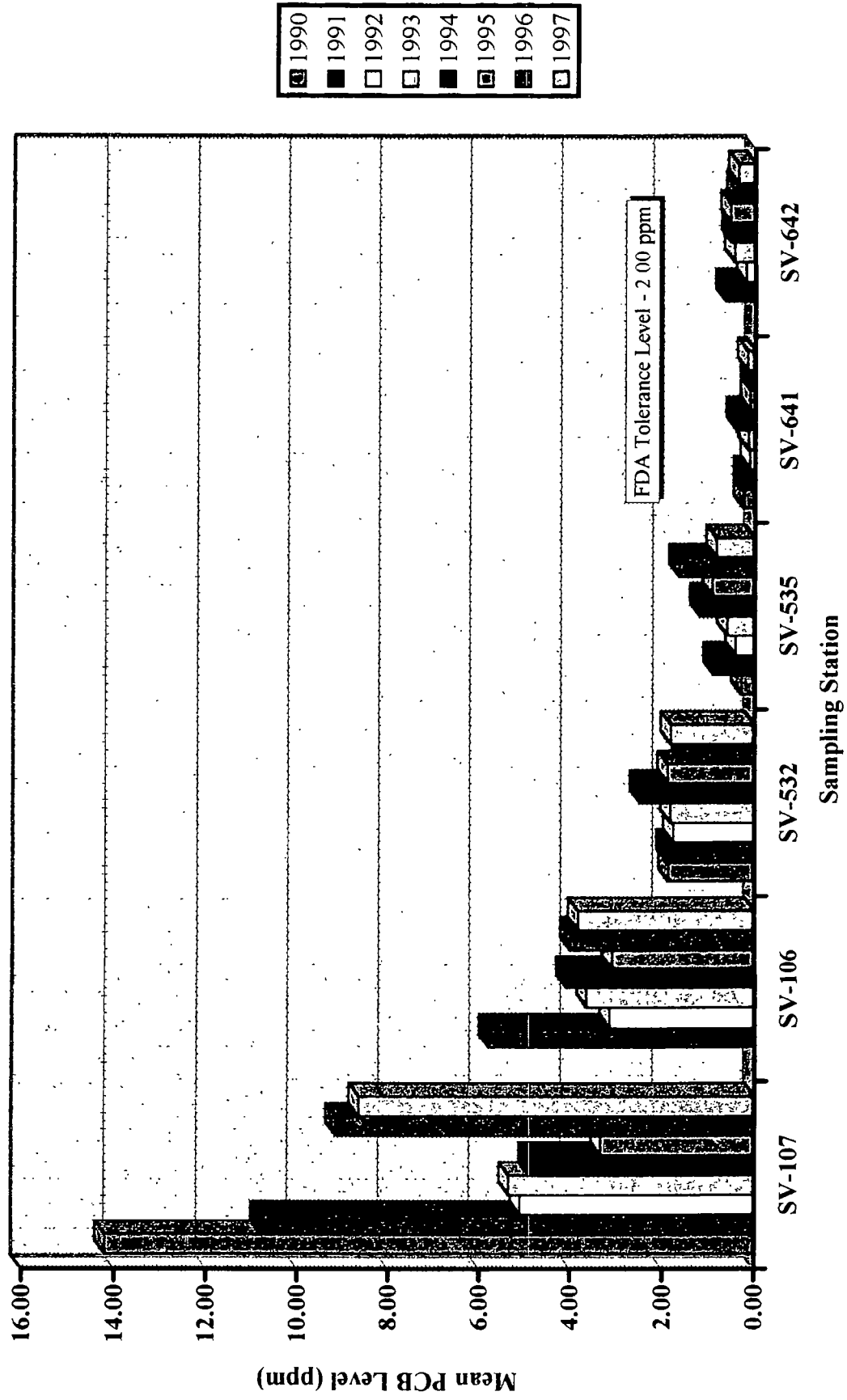


Figure 4 - PCB Levels in Largemouth Bass Fillet Samples (1990-1997),
Lake Hartwell OU2 Fish Study

Hybrid Bass

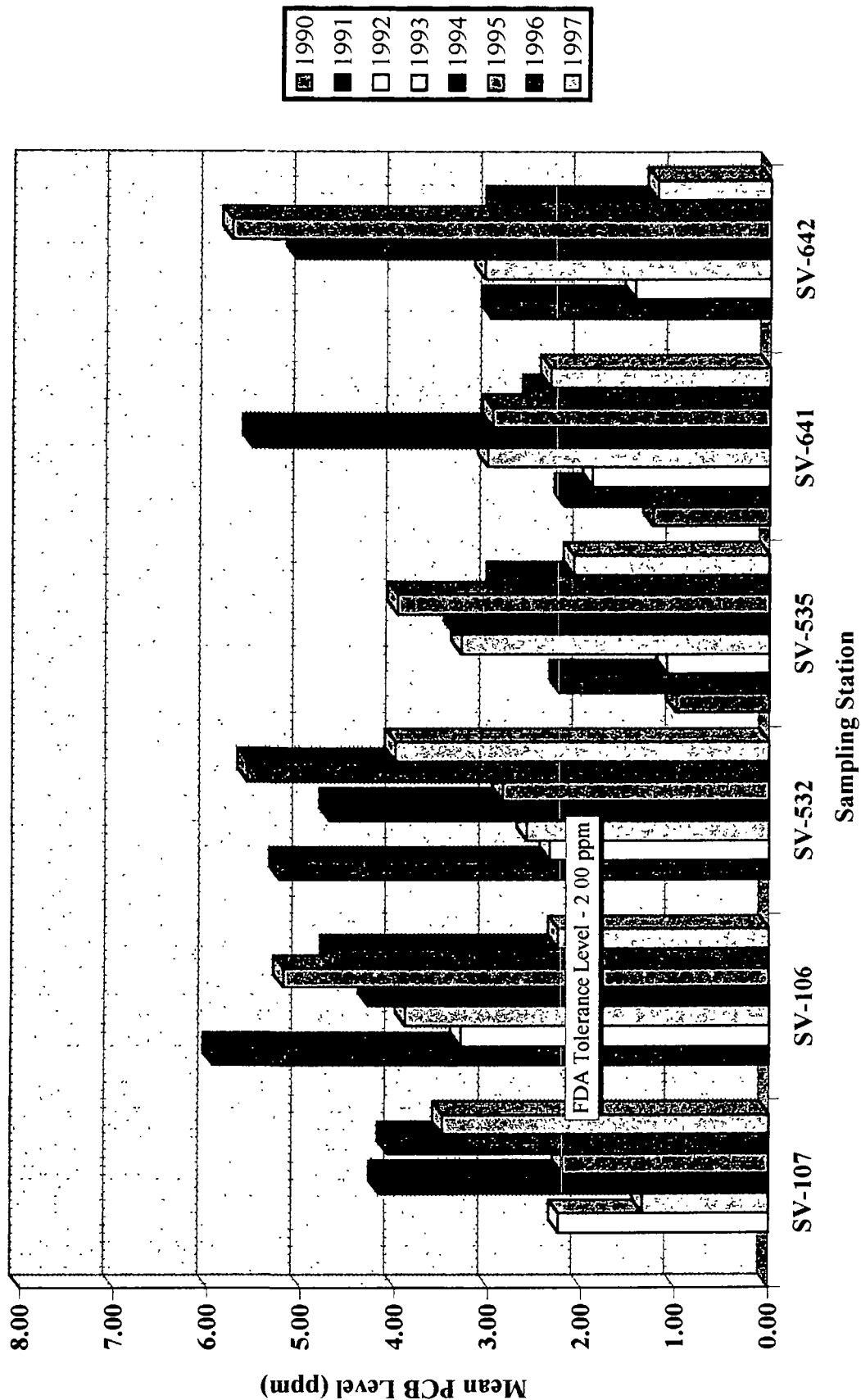


Figure 5 - PCB Levels in Hybrid Bass Fillet Samples (1990-1997),
Lake Hartwell OU2 Fish Study

Channel Catfish

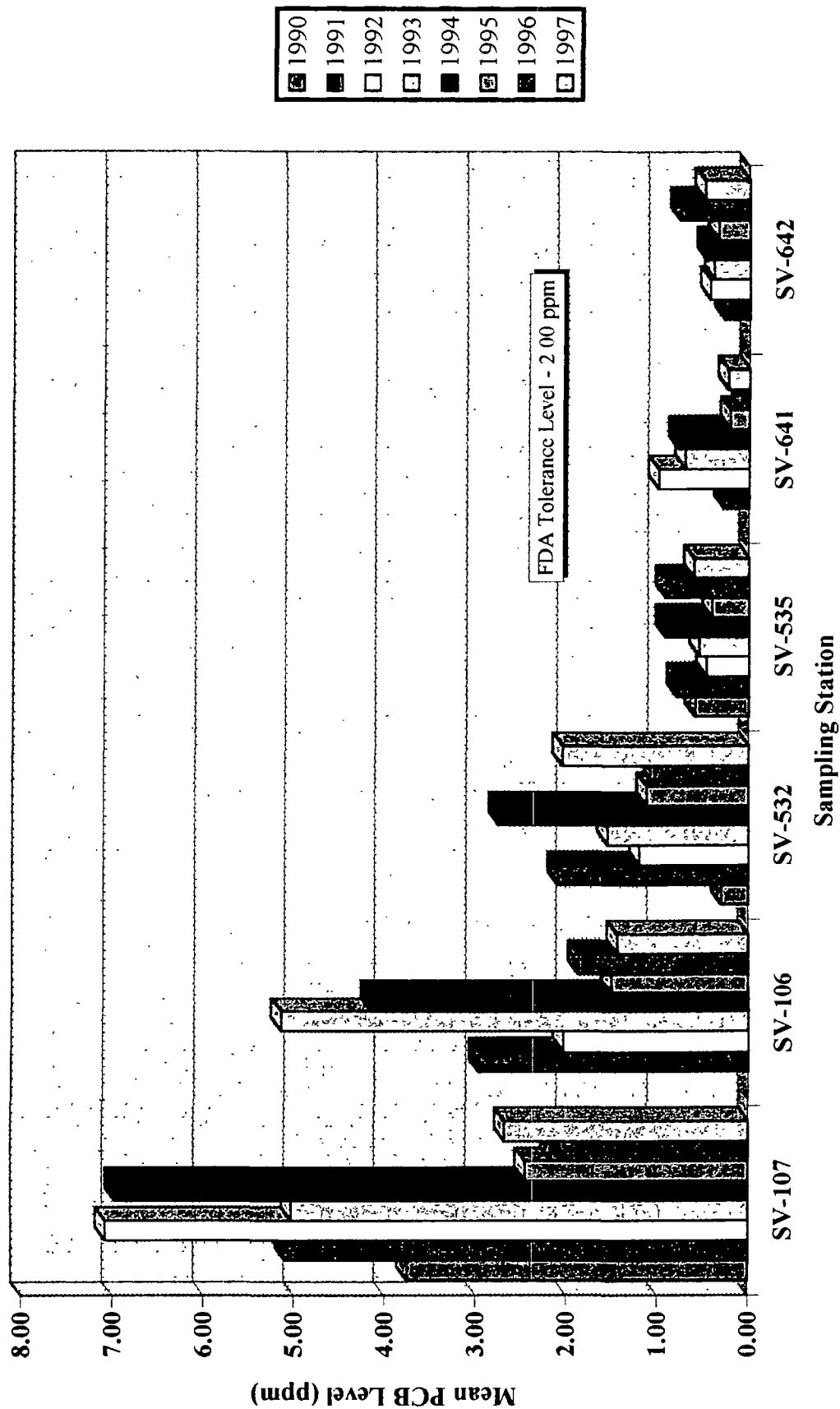


Figure 6 - PCB Levels in Channel Catfish Fillet Samples (1990-1997),
Lake Hartwell OU2 Fish Study

The database for hybrid bass does not include all years for all stations for the period 1990 through 1997 due to difficulties in collecting this highly mobile species. Hybrid bass were collected at all locations during 1997, however, three striped bass were substituted at stations SV-535 and SV-642 due to the lack of adequate sized hybrid bass during the sampling period. The mean PCB concentrations (see Figure 5) tend to indicate that the trend of PCB reduction indicated by largemouth bass on a localized basis is somewhat evidenced by hybrid bass. The historic data indicate that PCB concentrations appeared to be randomly scattered by date and location while the 1997 data indicated that the concentration of PCBs was lowest in the station near the dam (SV-642) which is the greatest distance from Twelvemile Creek. The degree of scatter in these data may be attributed to the wide migratory movements of the hybrid bass, which expose them to all areas of the lake.

The annual trends in mean PCB concentration in catfish filets (see Figure 6) were similar to those of the largemouth bass, as lower concentrations were detected with increasing distance from Twelvemile Creek. In addition, the 2.0 ppm level is exceeded only twice in the four most distant stations in individual samples. The concentrations detected at SV-107 and SV-106 tend to indicate somewhat of an increase during 1992-1994, however, the 1997 data indicate a general trend of PCB reductions in catfish filets lake-wide.

A total of three sampling surveys have been conducted from 1995 through 1997 with collection of consistent size and species of fish. With these three sets of data, the concentration of PCBs in the forage fish species were plotted, see Figures 7, 8, and 9 for bluegill, threadfin shad, and gizzard shad, respectively. These data, collected over a limited period of time do not indicate definitive trends in the reduction of PCBs in forage fish with the possible exception of gizzard shad (Figure 9). The gizzard shad data indicate an apparent steady decrease in PCBs over time and with distance downstream of Twelvemile Creek. In general, the decrease in PCB concentration with distance from the Twelvemile Creek is also observed in the bluegill and threadfin shad. In 1997 the concentration of PCB in bluegill and threadfin shad was higher than previous years. Additional data is needed to identify definitive trends in these data.

Bluegill

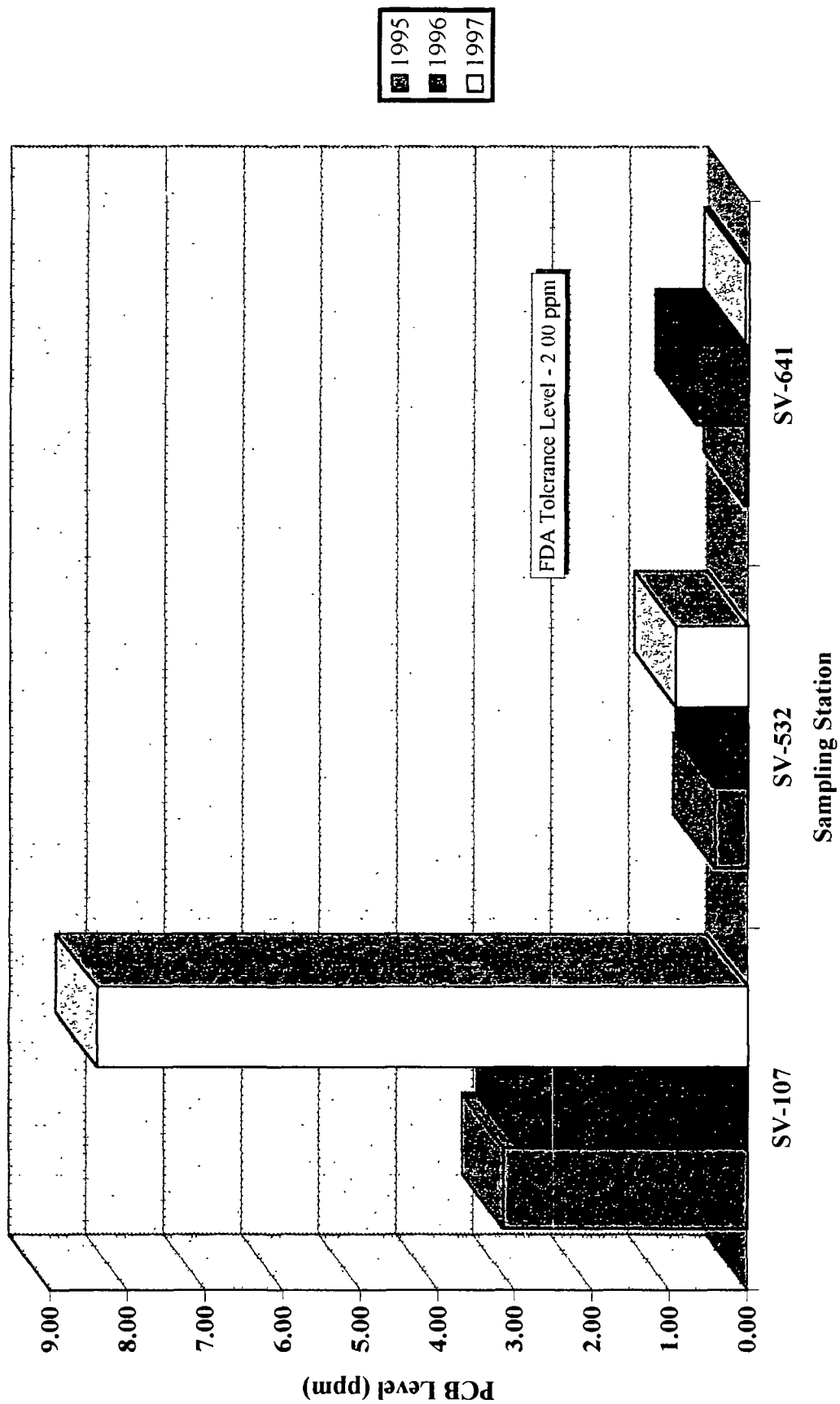


Figure 7 - PCB Levels in Bluegill Composite Samples (1995-1997),
Lake Hartwell OU2 Fish Study

Threadfin Shad

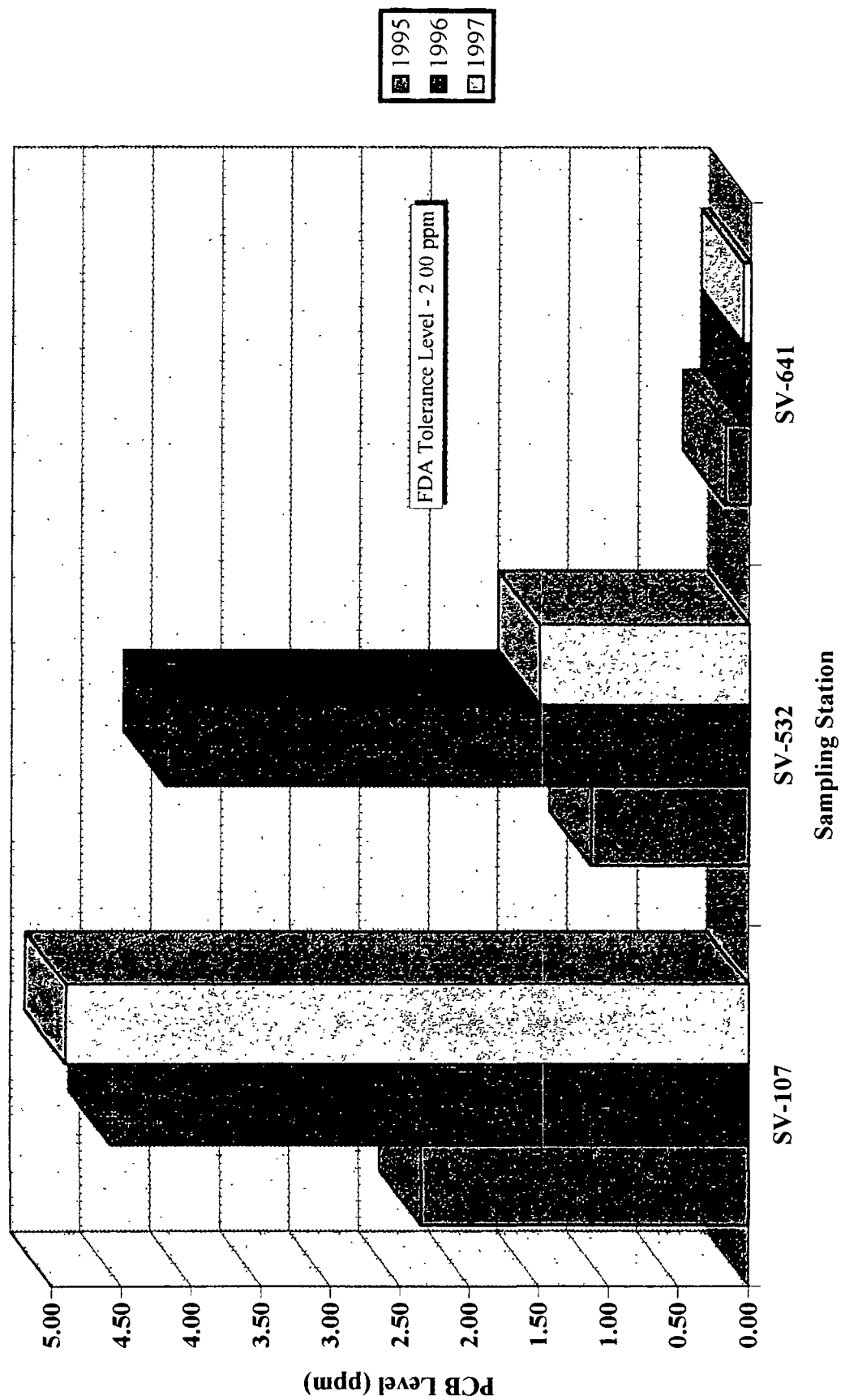


Figure 8 - PCB Levels in Threadfin Shad Composite Samples (1995-1997),
Lake Hartwell OU2 Fish Study

Gizzard Shad

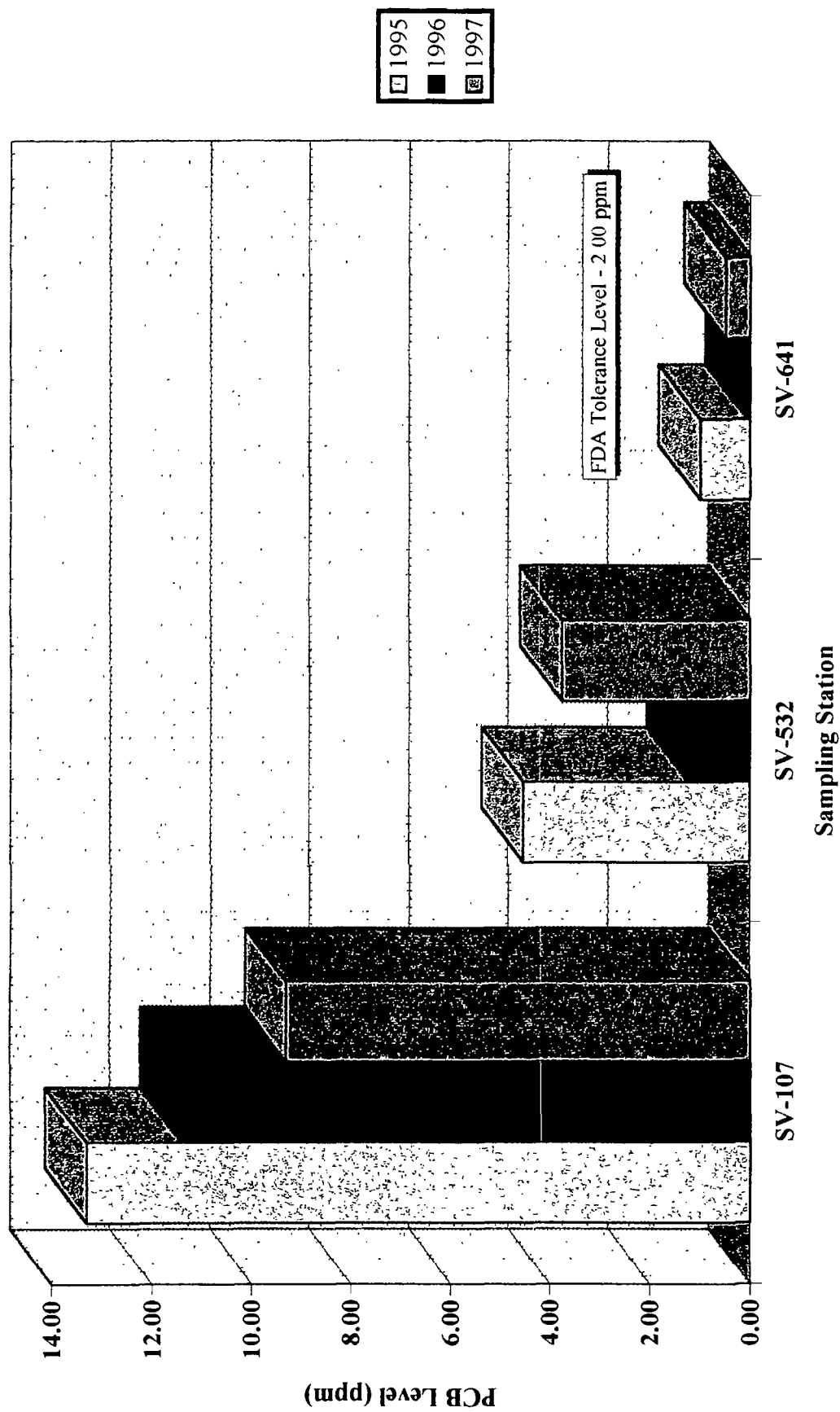


Figure 9 - PCB Levels in Gizzard Shad Composite Samples (1995-1997),
Lake Hartwell OU2 Fish Study

Sediment data are summarized in Table 7 for the 21 samples collected in April 1997. See Attachment II for individual results of analyses and Figures 2 and 3 for maps with locations and results. Sediment values ranged from 11.0 ppm (duplicate value of 6.19 ppm) collected at the most downstream sample point in the Twelvemile Creek Arm (SD-013), prior to its confluence with the Keowee River, to non-detected levels observed near the Lake Hartwell Dam background locations upstream and Tugaloo River Arm. The maximum concentration detected in 1997 was much less than the maximum concentration detected in 1995 but was slightly higher than the 1996 maximum value. The concentrations generally decreased in an upstream direction from the high value of 11.0 ppm to a concentration of 0.235 ppm near Maw Bridge (SD-006). The concentrations in Twelvemile Creek upstream of Lake Hartwell ranged from <0.130 ppm to 4.36 ppm, with 1.56 ppm detected directly downstream of the Sangamo Weston outfall (SD-001). A value of <0.130 ppm was reported for the station upstream of the outfall in Town Creek (SD-000). The PCB concentration also declined in a downstream direction from the maximum value in the Twelvemile Arm (SD-013) to concentrations <0.5 ppm near the dam and in the Tugaloo River Arm. In addition to the total PCB values given in Table 7, the various PCB Aroclors are identified for each sample. Aroclors identified in the sediment, in descending order of concentration and occurrence primarily include 1232, 1254 and 1248. Aroclors 1260, 1242, 1221, and 1016 were not detected in the sediment. Provided in Figure 10 are the results of sediment analyses for the past three years of data collection. Figure 10 generally illustrates the deposition of PCB in the Twelvemile Creek/Lake Hartwell system. The highest concentrations of PCB are found in the lower end of the Twelvemile Creek Arm (SD-011, SD-012 SD-013) and just downstream of Clemson at SD-106. Some trends in decreasing concentrations of PCB at specific locations are apparent in these data, however, definite trends are not evident throughout these stations.

The TOC values for all sediment samples ranged from 4,200 to 64,000 ppm. There does not appear to be a correlation between TOC and PCB concentration.

The results of analyses of the seven samples are summarized in Table 8 and illustrated in Figure 11. Seven specific Aroclor compounds reported by the analytical method only two detected in the *Corbicula* tissue. The two Aroclors detected were 1248 and 1254, which were detected in each of the seven samples. The *Corbicula* results are also graphically presented in Figure 12 for the sampling period 1995 to 1997. At present these data do not indicate definitive trends in the

TABLE 7

**LAKE HARTWELL OU2 SEDIMENT SAMPLING RESULTS
SPRING 1997**

Schlumberger Industries, Inc.
Sugar Lane, Texas

Sample Number	Date Sampled	Aroclor Identification- ug/g								Total PCB - µg/g	TOC µg/g
		1016	1221	1232	1242	1248	1254	1260			
SD000	4/23/97	<0 130	<0 130	<0 130	<0 130	<0 130	<0 130	<0 130	<0 130	<4200	
SD001	4/23/97	<0 220	<0 220	<0 220	<0 220	0 920	0 637	<0 220	1 56	<6300	
SD002	4/23/97	<0 158	<0 158	<0 158	<0 158	1 23	0 616	<0 158	1 85	<7800	
SD003	4/23/97	<0 170	<0 170	<0 170	<0 170	<0 170	<0 170	<0 170	<0 170	12,000	
SD004	4/23/97	<0 150	<0 150	<0 150	<0 150	0 204	0 188	<0 150	0 392	<6400	
SD005	4/23/97	<0 153	<0 153	<0 153	<0 153	0 184	0 167	<0 153	0 351	<7900	
SD005 Dup	4/23/97	<0 302	<0 302	<0 302	<0 302	2 11	2 25	<0 302	4 36	16,000	
SD006	4/23/97	<0 149	<0 149	<0 149	<0 149	0 235	<0 149	<0 149	0 235	15,000	
SD007	4/23/97	<0 159	<0 159	<0 159	<0 159	0 857	0 601	<0 159	1 46	20,000	
SD008	4/23/97	<0 188	<0 188	<0 188	<0 188	1 18	0 953	<0 188	2 13	31,000	
SD009	4/23/97	<0 277	<0 277	2 90	<0 277	<0 277	1 81	<0 277	4 71	49,000	
SD010	4/23/97	<0 197	<0 197	2 52	<0 197	<0 197	1 26	<0 197	3 78	27,000	
SD011	4/23/97	<0 269	<0 269	5 09	<0 269	<0 269	1 42	<0 269	6 51	36,000	
SD012	4/23/97	<0 273	<0 273	2 93	<0 273	<0 273	1 19	<0 273	4 12	38,000	
SD013	4/23/97	<0 512	<0 512	9 21	<0 512	<0 512	1 78	<0 512	11 0	30,000	
SD013 Dup	4/23/97	<0 301	<0 301	4 85	<0 301	<0 301	1 34	<0 301	6 19	29,000	
SD014	4/24/97	<0 319	<0 319	<0 319	<0 319	0 848	0 540	<0 319	1 39	39,000	
SD015	4/24/97	<0 327	<0 327	<0 327	<0 327	1 40	0 686	<0 327	2 09	26,000	
SD106	4/24/97	<0 417	<0 417	<0 417	<0 417	2 70	1 40	<0 417	4 10	64,000	
SD532	4/24/97	<0 228	<0 228	<0 228	<0 228	0 385	<0 228	<0 228	0 385	22,000	
SD535	4/24/97	<0 380	<0 380	<0 380	<0 380	0 512	<0 380	<0 380	0 512	38,000	
SD641	4/25/97	<0 383	<0 383	<0 383	<0 383	<0 383	<0 383	<0 383	<0 383	40,000	
SD642	4/24/97	<0 388	<0 388	<0 388	<0 388	<0 388	<0 388	<0 388	<0 388	34,000	



Figure 10 - PCB Levels in Sediment Samples (1995-1997),
Lake Hartwell OU2 Fish Study

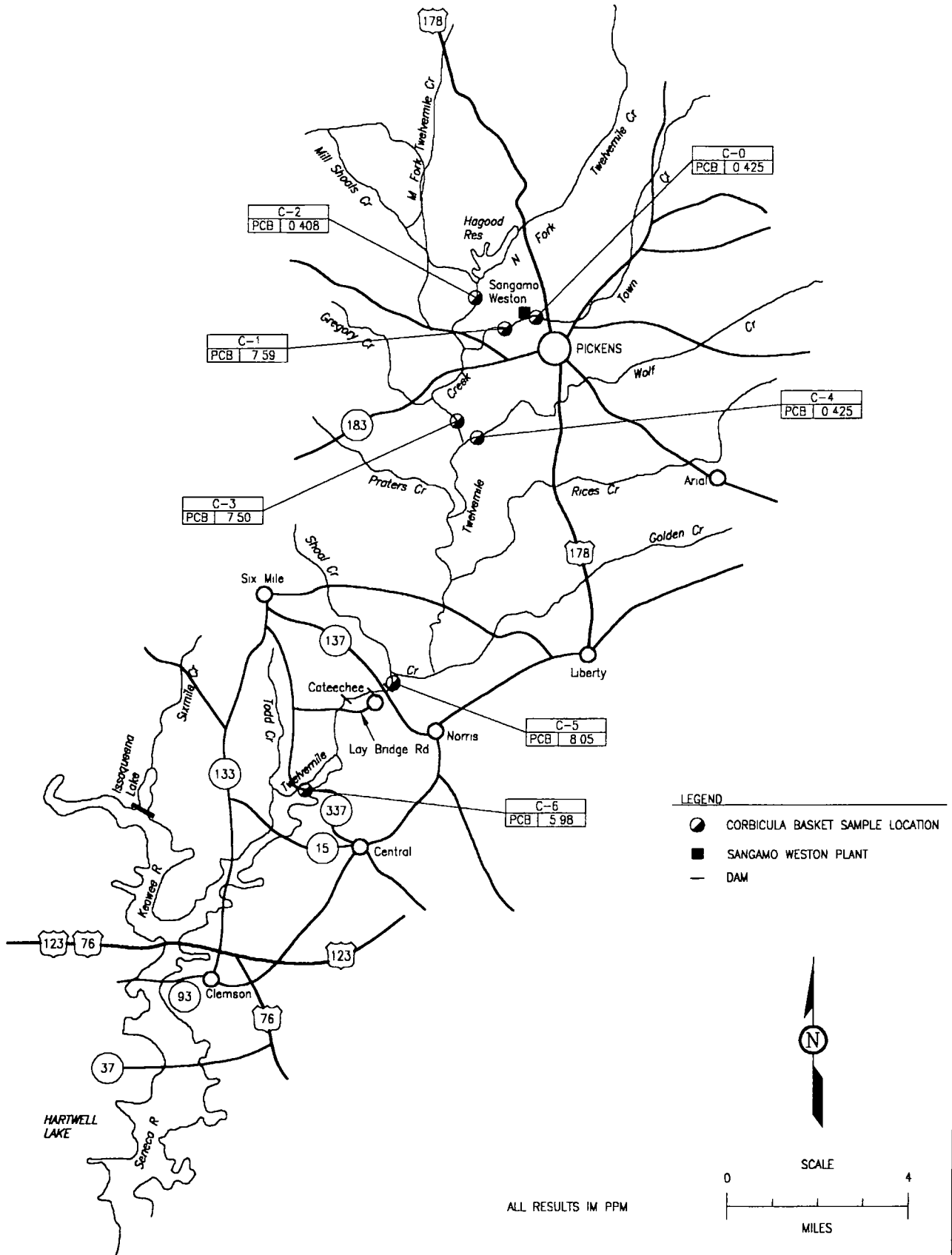
TABLE 8

OU-2 STUDY 1996
CORBICULA TISSUE ANALYSES

Schlumberger Industries, Inc.
Sugar Land, Texas

Station No.	Aroclor Identification and PCB Concentration (µg/g)							
	1016	1221	1232	1242	1248	1254	1260	Total
C-1 Town Creek downstream of Sangamo Weston	<0 313	<0 313	<0 313	313	2 2	0 919	<0 313	3 94
C-2 Twelvemile Creek upstream of Town Creek	<0 106	<0 106	<0 106	<0 106	0 179	0 117	<0 106	0 296
C-3 Twelvemile Creek at Algood Bridge	<0 779	<0 779	<0 779	<0 779	6 04	2 63	<0 779	8 67
C-4 Wolf Creek	<0 0936	<0 0936	<0 0936	<0 0936	<0 0936	<0 0936	<0 0936	<0 0936
C-5 Twelvemile Creek at 137 Bridge	<0 442	<0 442	<0 442	<0 442	4 54	3 03	<0 442	7 57
C-6 Twelvemile Creek at Maw Bridge (Hwy 337)	NA	NA	NA	NA	NA	NA	NA	NA
C-0 Town Creek Upstream of Sangamo Weston	<0 0858	<0 0858	<0 0858	<0 0858	0 101	0 169	<0 0858	0 270
C-0 Duplicate	<0 0895	<0 0895	<0 0895	<0 0895	0 230	0 146	<0 0895	0 376

NA Not Available, Sample lost due to vandalism or destruction



ERM-Southeast, Inc.
Brentwood, Tennessee

CORBICULA BASKET SAMPLING LOCATIONS IN TWELVEMILE CREEK WATERSHED SPRING 1997

FIGURE
11

Corbicula

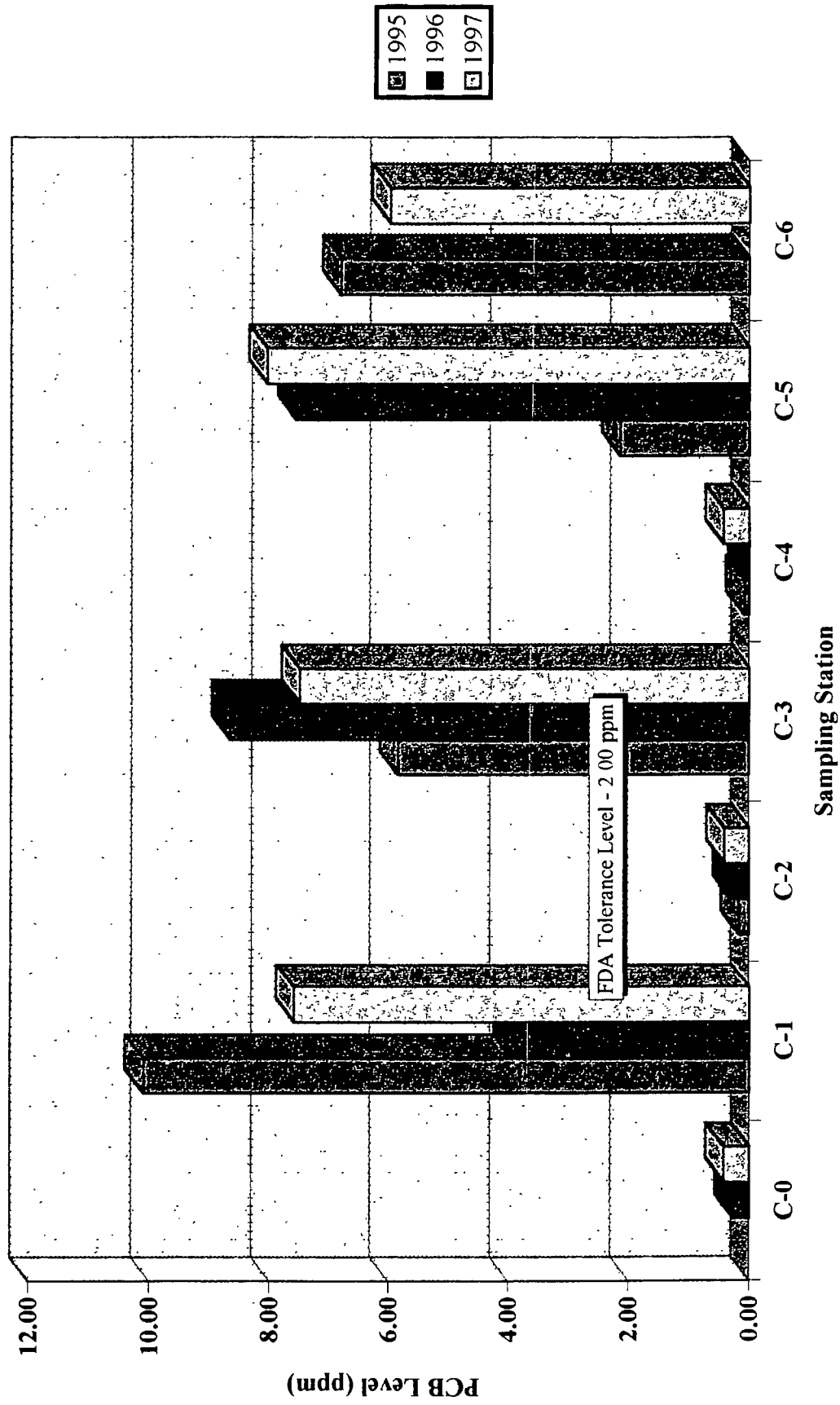


Figure 12 - PCB Levels in Corbicula Composite Samples (1995-1997),
Lake Hartwell OU2 Fish Study

results. The highest concentrations of PCBs were detected in *Corbicula* tissue downstream of the Sangamo Weston facility in Twelvemile Creek at Highway 137 Bridge (C-5) at 8.05 ppm and decreased in concentration in Twelvemile Creek downstream at C-6 to 6.0 ppm. The concentration in *Corbicula* downstream of the Sangamo Weston outfall was less than in 1996 with 7.59 ppm detected. The PCB concentration in *Corbicula* tissue at the Twelvemile Creek background location (C-2) was 0.408 ppm, while the concentration in the Town Creek background station was similar at 0.425 ppm.

4.0 DISCUSSION

4.1 FISH

The 1997 OU2 Fish Study results indicate that the PCB concentration was generally lower with increased distance from the Twelvemile Arm of Lake Hartwell in largemouth bass, channel catfish and forage fish and was decreasing with time. The concentration detected in hybrid bass was also lower in the three stations which were the greatest distance from Twelvemile Creek. Forage fish also appear to have localized levels of contamination similar to largemouth bass and channel catfish with the highest PCB concentrations in forage fish found in the Twelvemile Creek Arm. The 1996 fish results indicate a reduction in the PCB concentrations in largemouth bass and channel catfish at most stations from the period 1990 through 1996. Stations where the mean PCB concentrations in largemouth bass and catfish have been less than 2.0 ppm for this period are SV-532, SV-535, SV-641 and SV-642, as well as SV-106 for channel catfish. The PCB concentration in channel catfish was slightly greater than 2.0 ppm at SV-532 in 1997 at 2.05 ppm. The PCB concentrations in hybrid bass exceeded the 2.0 ppm FDA limit at all stations in 1997, with the exception of station SV-641, due to their migratory patterns. The PCB concentration is lower at the three stations farthest from Twelvemile Creek. The gizzard shad are beginning to indicate a pattern of both spatial and temporal decreases in PCB concentration while no definitive trends are presently apparent in the bluegill or threadfin shad.

4.2 SEDIMENT

The results of the sediment analyses indicates that PCB concentrations in shallow stream sediments were highest in the area of the lower Twelvemile Creek Arm of Lake Hartwell. A comparison of the 1997 results to the historic values discussed in the 1993 RI Report, show the concentrations of PCBs to have decreased significantly in the upper Twelvemile Creek area, particularly Town Creek, indicating a flushing of this area. Concentrations detected in other portions of

Twelvemile Creek and in tributaries below Town Creek were similar to the historic values. In the lower Twelvemile Creek area PCB concentrations generally range from 0.5 to 8.2 ppm. Those values were similar but generally lower than historic findings. The Upper Twelvemile Creek Arm includes approximately the upper four miles of impounded waters of Lake Hartwell. This is one of the most heavily sampled areas of the lake to date. The concentration of the five surface sediment composite samples of this area ranged from 0.235 ppm to 4.71 ppm. These values were generally less than those reported by the State and EPA from 1976 through 1985, which ranged from 1.7 ppm to 48.0 ppm, and those reported by ERM in 1995, which ranged from 0.943 ppm to 8.46 ppm. Germann (1988) indicated PCB surface sediment concentrations ranging from 5 to 50 ppm for this area. The 1997 data indicate that the PCB concentration in surficial sediments of the Upper Twelvemile Creek Arm were reduced from historic levels but are similar to 1996 data.

The Middle Twelvemile Creek Arm extends from Maw Bridge to the Highway 133 bridge. Two samples were collected in the area during the 1997 survey with values of 4.12 and 6.51 ppm PCBs detected. Historic samples have ranged in PCB concentration from 0.84 to 64.3 ppm from 1986 through 1988. The Phase I and II sampling of 1991 indicated concentrations ranging from 0.16 to 6.48 ppm in 45 samples. A review of the 1991 data indicates that the 1997 concentrations in this area are similar to historic values but reduced from the 1995 values of 10.7 and 16.0 ppm and slightly lower than the 1996 values of 5.81 and 6.53 ppm.

The lower Twelvemile Creek Arm (Highway 133 to Highway 123) was represented by one sample (SD-013) in the annual monitoring study where the highest concentration of PCBs was detected (8.6 ppm). This value was significantly lower than the concentration detected in 1995 (23.3 ppm) but similar to the 1996 value of 8.26. Historic samples in this location have ranged from 0.39 to 55.62 ppm with maximums of 12.03 ppm and 55.62 ppm detected in 1977 in 1985, respectively. The Phase I and II data of 1991 indicate concentrations ranged from 0.16 to 11.51 ppm, indicating a similar phenomena of downstream migration and settling, as observed in the Middle Twelvemile Creek Arm.

The Seneca River Arm/Upper Hartwell Lake area (Highway 123 to Highway 37) was sampled in 1997 at two locations, one near the upper end (SD-014) and the second at the lower end of this reach (SD-015). Concentrations of 1.39 ppm and 2.09 ppm, respectively, were recorded at these locations. Historic sampling indicates that concentrations have ranged from 0.01 to 14.26 ppm, while Phase I and II sampling indicated ranges of concentration from 0.04 to 5.26 ppm. The PCB concentration in this area of the lake appears to have steadily decreased since the historic beginning of the sampling.

Sediment sampling in the lower section of Lake Hartwell in 1997 included five stations which correspond to the fish sampling locations SD-106, SD-532, SD-535, SD-641, and SD-642. The PCB concentrations ranged from 4.10 ppm at SD-106 to <0.383 at SD-641 in the Tugaloo River Arm. A concentration of <0.388 ppm was detected near the dam at SD-642. The historic sampling data do not appear to reflect many locations corresponding to the above locations. Specific locations which have been sampled in the past include SD-106, which was sampled by SCDHEC in 1976. The range of concentrations determined in 1976 at SD-106 was 0.01 to 6.59 ppm, with concentrations ranging from 0.15 to 1.74 ppm during the 1994 Phase I study. The concentration detected during 1996 appears to fall in this range.

Similar to Phase I sampling, (1991), PCBs were detected below levels of detection in the Tugaloo River Arm in 1997 (<0.383 ppm). The concentration detected at SD-535 (confluence of the Seneca and Tugaloo River Arms) was higher in the 1995 study (1.83 ppm) than in 1991 or 1996 where maximum values of 0.52 ppm and <0.470 ppm were detected, respectively. During the 1997 study a value of 0.512 ppm was detected which appears to be similar to the 1996 value. The concentration of PCBs at Hartwell Dam (SD-642) has been detected as high as 15 ppm in the mid 1980s. However, during 1991, 1995, 1996, and 1997 PCB concentrations have been below 1 ppm.

4.3

CORBICULA

Results of the *Corbicula* study indicate no consistent patterns in PCB concentrations between the 1995, 1996, and 1997 surveys with the exception of where PCBs are generally detected (C-1, C-3, C-5, and C-6) and where they are not (C-0, C-2, and C-4). While the concentration at most locations was greater in 1996 than in 1995, the maximum concentration was higher in 1995 than in 1996. The concentrations in 1997 were higher at C-1 than in 1996, however, most locations were similar from 1996 to 1997. Overall, the PCB concentration tends to decrease in a downstream direction from the Sangamo Weston Outfall. Background concentrations indicate that PCBs are accumulated upstream from Sangamo Weston in both Twelvemile and Town Creeks.

DATA QUALITY

Samples of fish and *Corbicula* tissue and sediment were analyzed for PCBs from the Sangamo Weston OU2 study area. The analytical method used was EPA SW-846, Method 8080. Fish and sediment samples were collected from April 15 to April 24, 1997, while *Corbicula* were collected May 21, 1997. Analyses of fish and sediment were performed by Northeast Analytical from May 8 to June 12, 1996, while *Corbicula* were analyzed by June 12, 1997 by NEA. Quality assurance samples were collected in the field and submitted for analysis. Quality assurance samples collected in the field included field prepared duplicates for sediment at the rate of one per ten samples collected. Equipment rinsate, and field blanks were collected for both fish and sediment samples at a rate of one per 20 samples collected. Duplicates of fish tissue were split in the laboratory. All samples were delivered overnight to the laboratory under chain of custody by Federal Express. All chain of custody records were found to be complete. Sample preservation requirements for PCB analysis are to maintain the sample at a temperature of 4° C or less. During this sampling event fish tissue samples were kept on ice prior to transport, and sediment and water samples were also cooled on ice.

EPA and SCDHEC require that samples to be analyzed for PCBs be extracted within 365-days following collection if frozen and analyzed within 40 days following extraction. No samples were found to have exceeded the allowable holding time.

The seven Aroclors specified as reportable using method 8080 were reported for each sample analyzed. The practical quantitation limit (PQL) was specified for each Aroclor and sample combination. The PQLs had a range from 0.101 to 1.67 ppm for fish tissue and 0.13 to 0.417 ppm for sediments. The PQLs specified above are within the same range as the estimated quantitation limit (EQL) for high concentration soils and sludges referenced in Method 8080.

QA/QC analytical results are also included in Attachment 1. PCBs were not present in any of the equipment rinsates or trip blanks at a PQL of 0.050 to 0.052 ppb. This PQL is less than the Method 8080 EQL of 0.065 ppb. This indicates the presence of PCBs was not due to equipment contamination.

Two sediment, one *Corbicula*, and 13 fish tissue samples were submitted in duplicate for analysis. The results indicated very good precision for the combined sample collection and analysis procedure. There is no guideline for an acceptable level of precision for the combined sample collection and analysis of duplicate samples for PCBs, but the relative precision of most duplicate samples tested was less than 43% and generally less than 10%, which indicates good precision. One exception was sediment sample SD-005 where the sample value was 0.351 ppm.

and the duplicate value was 4.36 ppm. The difference in these values is partially explained by the TOC value which was much lower in the SD-005 sample than the SD-005 duplicate. It is speculated that a particle of organic material was utilized in the duplicate sample which had a high PCB content.

Laboratory quality control procedures included the addition of surrogate standards prior to analysis, the analysis of a duplicate and matrix spike on selected samples, and the analysis of method blanks.

In accordance with Method 8080 procedures two surrogate standards, tetrachloromethaxylene and dichlorobiphenol, were incorporated into all samples analyzed. The percent recovery of these surrogates ranged between 97.6% and 113%. There are no numerical recovery goals established for these surrogates, however, the recoveries of the surrogate standards are within the recovery range specified in Method 8080 for PCBs.

Laboratory duplicates (duplicate of the matrix spike (MSD)) were prepared and analyzed on 12 samples. The percent differences for total PCBs ranged between 0.897% and 30.4%. The agreement between these values is very good and is indicative of good precision in the data with the exception of two values which the laboratory indicated recoveries were elevated due to corresponding peaks in the sample. Nine of the 12 values were from 92.2% to 111%.

Laboratory matrix spike samples were prepared and analyzed on the same 10 samples. The percent recoveries for total PCBs ranged between 92.2% and 194%. These recoveries are most favorable as compared to the recoveries referenced in Method 8080 and are indicative of good accuracy in the data. The matrix spike duplicate samples recoveries were elevated in some samples due to corresponding peaks in the sample.

A total of 15 laboratory method blanks were analyzed. PCBs were not detected in any method blank. The maximum PQLs for the method blanks were 0.05 µg/L (ppb) for water samples and 0.110 µg/g (ppm) for solid samples.

ATTACHMENT I

***Fish Analytical Data
Lake Hartwell
April 1997***

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-01	NEA ID:	9701637		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

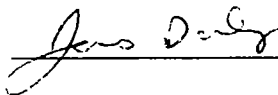
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 669	µg/g
Aroclor 1221	ND	0 669	µg/g
Aroclor 1232	ND	0 669	µg/g
Aroclor 1242	ND	0 669	µg/g
Aroclor 1248	ND	0 669	µg/g
Aroclor 1254	7 46	0 669	µg/g
Aroclor 1260	0 940	0 669	µg/g
Total PCB Results > PQL	8 4		

Date Analysis Completed

02-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 13, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV107-02	NEA ID:	9701638		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

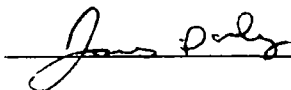
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 322	µg/g
Aroclor 1221	ND	0 322	µg/g
Aroclor 1232	ND	0 322	µg/g
Aroclor 1242	ND	0 322	µg/g
Aroclor 1248	ND	0 322	µg/g
Aroclor 1254	4 45	0 322	µg/g
Aroclor 1260	0 447	0 322	µg/g
Total PCB Results > REPORTING LIMIT	4 9		

Date Analysis Completed

11-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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CERTIFICATE OF ANALYSIS
May 13, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV107-03	NEA ID:	9701639		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

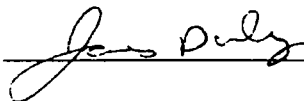
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 448	µg/g
Aroclor 1221	ND	0 448	µg/g
Aroclor 1232	ND	0 448	µg/g
Aroclor 1242	ND	0 448	µg/g
Aroclor 1248	ND	0 448	µg/g
Aroclor 1254	5 32	0 448	µg/g
Aroclor 1260	0 633	0 448	µg/g
Total PCB Results > REPORTING LIMIT	5 95		

Date Analysis Completed

11-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 13, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV107-04	NEA ID:	9701640		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.329	µg/g
Aroclor 1221	ND	0.329	µg/g
Aroclor 1232	ND	0.329	µg/g
Aroclor 1242	ND	0.329	µg/g
Aroclor 1248	ND	0.329	µg/g
Aroclor 1254	5.50	0.329	µg/g
Aroclor 1260	0.851	0.329	µg/g
Total PCB Results > REPORTING LIMIT	6.35		

Date Analysis Completed

11-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
May 13, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV107-05	NEA ID:	9701641		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.219	µg/g
Aroclor 1221	ND	0.219	µg/g
Aroclor 1232	ND	0.219	µg/g
Aroclor 1242	ND	0.219	µg/g
Aroclor 1248	ND	0.219	µg/g
Aroclor 1254	3.30	0.219	µg/g
Aroclor 1260	0.455	0.219	µg/g
Total PCB Results > REPORTING LIMIT	3.76		

Date Analysis Completed

11-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-06	NEA ID:	9701642		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.443	µg/g
Aroclor 1221	ND	0.443	µg/g
Aroclor 1232	ND	0.443	µg/g
Aroclor 1242	ND	0.443	µg/g
Aroclor 1248	ND	0.443	µg/g
Aroclor 1254	3.06	0.443	µg/g
Aroclor 1260	0.842	0.443	µg/g
Total PCB Results > PQL	3.902		

Date Analysis Completed

03-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
MAY 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV107-06 (DUP)	<u>NEA ID:</u>	9701642DUP
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/15/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/17/97 <u>TIME:</u> 10:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.432	µg/g
Aroclor 1221	ND	0.432	µg/g
Aroclor 1232	ND	0.432	µg/g
Aroclor 1242	ND	0.432	µg/g
Aroclor 1248	ND	0.432	µg/g
Aroclor 1254	3.01	0.432	µg/g
Aroclor 1260	0.757	0.432	µg/g
Total PCB Results > PQL	3.77		
Date Analysis Completed	3-MAY-97		

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-107-07	NEA ID:	9702089		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/24/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

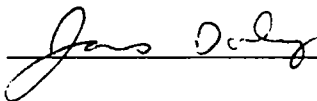
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.766	µg/g
Aroclor 1221	ND	0.766	µg/g
Aroclor 1232	ND	0.766	µg/g
Aroclor 1242	ND	0.766	µg/g
Aroclor 1248	ND	0.766	µg/g
Aroclor 1254	10.2	0.766	µg/g
Aroclor 1260	1.41	0.766	µg/g
Total PCB Results > PQL	11.61		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-08	NEA ID:	9701644		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

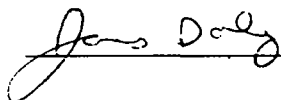
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	1 08	µg/g
Aroclor 1221	ND	1 08	µg/g
Aroclor 1232	ND	1 08	µg/g
Aroclor 1242	ND	1 09	µg/g
Aroclor 1248	ND	1 08	µg/g
Aroclor 1254	10 9	1 08	µg/g
Aroclor 1260	1 65	1 08	µg/g
Total PCB Results > PQL	12 55		

Date Analysis Completed

03-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-09 NEA ID: 9701645
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	1 67	µg/g
Aroclor 1221	ND	1 67	µg/g
Aroclor 1232	ND	1 67	µg/g
Aroclor 1242	ND	1 67	µg/g
Aroclor 1248	ND	1 67	µg/g
Aroclor 1254	16 5	1 67	µg/g
Aroclor 1260	1 94	1 67	µg/g
Total PCB Results > PQL	18 44		

Date Analysis Completed

03-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-10	NEA ID:	9701646		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

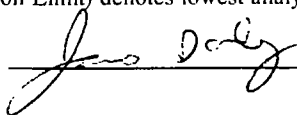
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.779	µg/g
Aroclor 1221	ND	0.779	µg/g
Aroclor 1232	ND	0.779	µg/g
Aroclor 1242	ND	0.779	µg/g
Aroclor 1248	ND	0.779	µg/g
Aroclor 1254	8.00	0.779	µg/g
Aroclor 1260	1.22	0.779	µg/g
Total PCB Results > PQL	9.22		

Date Analysis Completed

03-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-107-11	NEA ID:	9702090		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/24/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

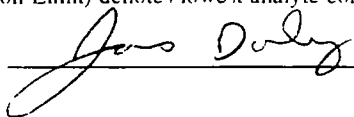
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.551	µg/g
Aroclor 1221	ND	0.551	µg/g
Aroclor 1232	ND	0.551	µg/g
Aroclor 1242	ND	0.551	µg/g
Aroclor 1248	ND	0.551	µg/g
Aroclor 1254	7.72	0.551	µg/g
Aroclor 1260	0.841	0.551	µg/g
Total PCB Results > PQL	8.561		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature



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CERTIFICATE OF ANALYSIS

May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-12	NEA ID:	9701648		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.739	µg/g
Aroclor 1221	ND	0.739	µg/g
Aroclor 1232	ND	0.739	µg/g
Aroclor 1242	ND	0.739	µg/g
Aroclor 1248	ND	0.739	µg/g
Aroclor 1254	5.52	0.739	µg/g
Aroclor 1260	0.827	0.739	µg/g
Total PCB Results > PQL	6.347		

Date Analysis Completed

03-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-13 NEA ID: 9701649
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

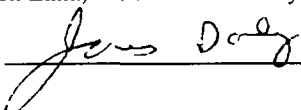
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	1 37	0 107	µg/g
Aroclor 1260	0 325	0 107	µg/g
Total PCB Results > PQL	1 695		

Date Analysis Completed

03-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-14	NEA ID:	9701650		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

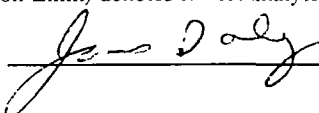
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 101	µg/g
Aroclor 1221	ND	0 101	µg/g
Aroclor 1232	ND	0 101	µg/g
Aroclor 1242	ND	0 101	µg/g
Aroclor 1248	ND	0 101	µg/g
Aroclor 1254	1 51	0 101	µg/g
Aroclor 1260	0 394	0 101	µg/g
Total PCB Results > PQL	1 904		

Date Analysis Completed

03-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
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Authorized Signature



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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-15 NEA ID: 9701651
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	ND	0 109	µg/g
Aroclor 1254	1 99	0 109	µg/g
Aroclor 1260	0 513	0 109	µg/g
Total PCB Results > PQL	2 503		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-16 NEA ID: 9701652
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

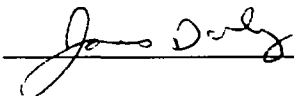
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.445	µg/g
Aroclor 1221	ND	0.445	µg/g
Aroclor 1232	ND	0.445	µg/g
Aroclor 1242	ND	0.445	µg/g
Aroclor 1248	ND	0.445	µg/g
Aroclor 1254	5.53	0.445	µg/g
Aroclor 1260	1.14	0.445	µg/g
Total PCB Results > PQL	6.67		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-17 NEA ID: 9701653
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

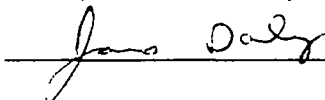
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 106	µg/g
Aroclor 1221	ND	0 106	µg/g
Aroclor 1232	ND	0 106	µg/g
Aroclor 1242	ND	0 106	µg/g
Aroclor 1248	ND	0 106	µg/g
Aroclor 1254	0 579	0 106	µg/g
Aroclor 1260	0 242	0 106	µg/g
Total PCB Results > PQL	0 821		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc
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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-18 NEA ID: 9701654
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 297	µg/g
Aroclor 1221	ND	0 297	µg/g
Aroclor 1232	ND	0 297	µg/g
Aroclor 1242	ND	0 297	µg/g
Aroclor 1248	ND	0 297	µg/g
Aroclor 1254	3 10	0 297	µg/g
Aroclor 1260	0 635	0 297	µg/g
Total PCB Results > PQL	3 735		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
MAY 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV107-18 (DUP)	<u>NEA ID:</u>	9701654DUP
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/15/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/17/97 <u>TIME:</u> 10:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.327	µg/g
Aroclor 1221	ND	0.327	µg/g
Aroclor 1232	ND	0.327	µg/g
Aroclor 1242	ND	0.327	µg/g
Aroclor 1248	ND	0.327	µg/g
Aroclor 1254	4.17	0.327	µg/g
Aroclor 1260	0.847	0.327	µg/g
Total PCB Results > PQL	5.02		
Date Analysis Completed	1-MAY-97		

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-19	NEA ID:	9701655		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

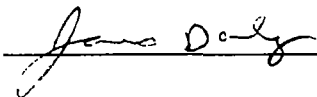
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.655	µg/g
Aroclor 1221	ND	0.655	µg/g
Aroclor 1232	ND	0.655	µg/g
Aroclor 1242	ND	0.655	µg/g
Aroclor 1248	ND	0.655	µg/g
Aroclor 1254	7.74	0.655	µg/g
Aroclor 1260	1.38	0.655	µg/g
Total PCB Results > PQL	9.12		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-20	NEA ID:	9701656		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

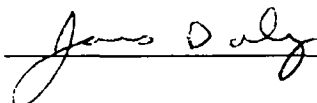
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 195	µg/g
Aroclor 1221	ND	0 195	µg/g
Aroclor 1232	ND	0 195	µg/g
Aroclor 1242	ND	0 195	µg/g
Aroclor 1248	ND	0 195	µg/g
Aroclor 1254	2 16	0 195	µg/g
Aroclor 1260	0 624	0 195	µg/g
Total PCB Results > PQL	2 784		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV107-21	NEA ID:	9701657		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

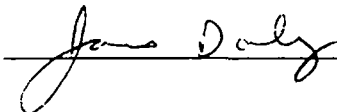
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.211	µg/g
Aroclor 1221	ND	0.211	µg/g
Aroclor 1232	ND	0.211	µg/g
Aroclor 1242	ND	0.211	µg/g
Aroclor 1248	ND	0.211	µg/g
Aroclor 1254	2.64	0.211	µg/g
Aroclor 1260	0.611	0.211	µg/g
Total PCB Results > PQL	3.251		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-22 NEA ID: 9701658
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

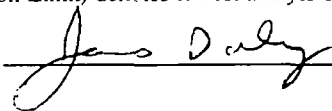
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 112	µg/g
Aroclor 1221	ND	0 112	µg/g
Aroclor 1232	ND	0 112	µg/g
Aroclor 1242	ND	0 112	µg/g
Aroclor 1248	ND	0 112	µg/g
Aroclor 1254	0 822	0 112	µg/g
Aroclor 1260	0 227	0 112	µg/g
Total PCB Results > PQL	1 049		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 13, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID: SV107-23 NEA ID: 9701659
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT NO: 4517
SAMPLER ID: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	1 06	µg/g
Aroclor 1221	ND	1 06	µg/g
Aroclor 1232	ND	1 06	µg/g
Aroclor 1242	ND	1 06	µg/g
Aroclor 1248	ND	1 06	µg/g
Aroclor 1254	8 04	1 06	µg/g
Aroclor 1260	1 25	1 06	µg/g
Total PCB Results > REPORTING LIMIT	9 29		

Date Analysis Completed

11-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV107-24 NEA ID: 9701660
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

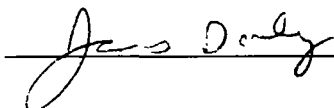
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.217	µg/g
Aroclor 1221	ND	0.217	µg/g
Aroclor 1232	ND	0.217	µg/g
Aroclor 1242	ND	0.217	µg/g
Aroclor 1248	ND	0.217	µg/g
Aroclor 1254	2.78	0.217	µg/g
Aroclor 1260	0.583	0.217	µg/g
Total PCB Results > PQL	3.363		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV107-25	NEA ID:	9701808		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.208	µg/g
Aroclor 1221	ND	0.208	µg/g
Aroclor 1232	ND	0.208	µg/g
Aroclor 1242	ND	0.208	µg/g
Aroclor 1248	ND	0.208	µg/g
Aroclor 1254	3.00	0.208	µg/g
Aroclor 1260	0.469	0.208	µg/g
Total PCB Results > REPORTING LIMIT	3.47		

Date Analysis Completed

11-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV107-26	NEA ID:	9701809		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080. Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	1 35	0 107	µg/g
Aroclor 1260	0 238	0 107	µg/g
Total PCB Results > REPORTING LIMIT	1 59		

Date Analysis Completed

11-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110

BRENTWOOD, TN 37027

CLIENT: JIM ORR

CUSTOMER ID:	SV107-27	NEA ID:	9701810		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

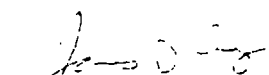
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	1 92	0 110	µg/g
Aroclor 1260	0 389	0 110	µg/g
Total PCB Results > REPORTING LIMIT	2 31		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-01	NEA ID:	9701663		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

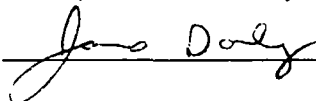
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.323	µg/g
Aroclor 1221	ND	0.323	µg/g
Aroclor 1232	ND	0.323	µg/g
Aroclor 1242	ND	0.323	µg/g
Aroclor 1248	ND	0.323	µg/g
Aroclor 1254	3.76	0.323	µg/g
Aroclor 1260	0.714	0.323	µg/g
Total PCB Results > PQL	4.474		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-02 NEA ID: 9701664
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

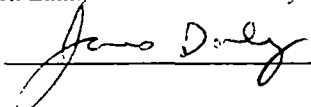
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.317	µg/g
Aroclor 1221	ND	0.317	µg/g
Aroclor 1232	ND	0.317	µg/g
Aroclor 1242	ND	0.317	µg/g
Aroclor 1248	ND	0.317	µg/g
Aroclor 1254	3.40	0.317	µg/g
Aroclor 1260	0.731	0.317	µg/g
Total PCB Results > PQL	4.131		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
MAY 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV106-02 (DUP)	<u>NEA ID:</u>	9701664DUP
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/15/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/17/97 <u>TIME:</u> 10:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.329	µg/g
Aroclor 1221	ND	0.329	µg/g
Aroclor 1232	ND	0.329	µg/g
Aroclor 1242	ND	0.329	µg/g
Aroclor 1248	ND	0.329	µg/g
Aroclor 1254	3.88	0.329	µg/g
Aroclor 1260	1.04	0.329	µg/g
Total PCB Results > PQL	4 92		

Date Analysis Completed 1-MAY-97

Authorized Signature. _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-03	NEA ID:	9701665		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

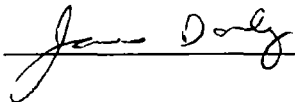
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 223	µg/g
Aroclor 1221	ND	0 223	µg/g
Aroclor 1232	ND	0 223	µg/g
Aroclor 1242	ND	0 223	µg/g
Aroclor 1248	ND	0 223	µg/g
Aroclor 1254	2 36	0 223	µg/g
Aroclor 1260	0 622	0 223	µg/g
Total PCB Results > PQL	2 982		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-04	NEA ID:	9701666		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	1 68	0 107	µg/g
Aroclor 1260	0 317	0 107	µg/g
Total PCB Results > PQL	1 997		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-05	NEA ID:	9701667		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

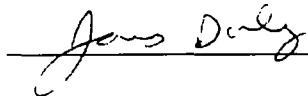
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	1 10	µg/g
Aroclor 1221	ND	1 10	µg/g
Aroclor 1232	ND	1 10	µg/g
Aroclor 1242	ND	1 10	µg/g
Aroclor 1248	ND	1 10	µg/g
Aroclor 1254	9 67	1 10	µg/g
Aroclor 1260	1 54	1 10	µg/g
Total PCB Results > PQL	11 21		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-06	NEA ID:	9701668		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

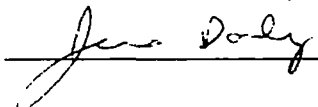
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.324	µg/g
Aroclor 1221	ND	0.324	µg/g
Aroclor 1232	ND	0.324	µg/g
Aroclor 1242	ND	0.324	µg/g
Aroclor 1248	ND	0.324	µg/g
Aroclor 1254	3.27	0.324	µg/g
Aroclor 1260	0.638	0.324	µg/g
Total PCB Results > PQL	3.908		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-07 NEA ID: 9701669
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

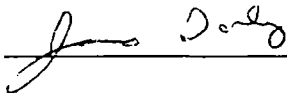
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.212	µg/g
Aroclor 1221	ND	0.212	µg/g
Aroclor 1232	ND	0.212	µg/g
Aroclor 1242	ND	0.212	µg/g
Aroclor 1248	ND	0.212	µg/g
Aroclor 1254	2.25	0.212	µg/g
Aroclor 1260	0.789	0.212	µg/g
Total PCB Results > PQL	3.039		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-08 NEA ID: 9701670
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 222	µg/g
Aroclor 1221	ND	0 222	µg/g
Aroclor 1232	ND	0 222	µg/g
Aroclor 1242	ND	0 222	µg/g
Aroclor 1248	ND	0 222	µg/g
Aroclor 1254	2 35	0 222	µg/g
Aroclor 1260	0 381	0 222	µg/g
Total PCB Results > PQL	2 731		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-09 NEA ID: 9701671
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

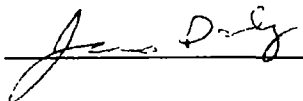
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 105	µg/g
Aroclor 1221	ND	0 105	µg/g
Aroclor 1232	ND	0 105	µg/g
Aroclor 1242	ND	0 105	µg/g
Aroclor 1248	ND	0 105	µg/g
Aroclor 1254	1 26	0 105	µg/g
Aroclor 1260	0 653	0 105	µg/g
Total PCB Results > PQL	1 913		

Date Analysis Completed

1-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV-106-10 NEA ID: 9702092
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/24/97 TIME: N/A
DATE RECEIVED: 04/26/97 TIME: 10 30 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

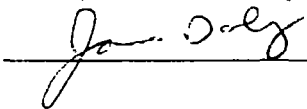
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 217	µg/g
Aroclor 1221	ND	0 217	µg/g
Aroclor 1232	ND	0 217	µg/g
Aroclor 1242	ND	0 217	µg/g
Aroclor 1248	ND	0 217	µg/g
Aroclor 1254	1 61	0 217	µg/g
Aroclor 1260	0 297	0 217	µg/g
Total PCB Results > PQL	1 907		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-11 NEA ID: 9701673
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

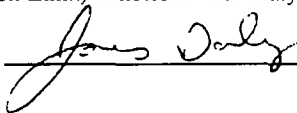
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.112	µg/g
Aroclor 1221	ND	0.112	µg/g
Aroclor 1232	ND	0.112	µg/g
Aroclor 1242	ND	0.112	µg/g
Aroclor 1248	ND	0.112	µg/g
Aroclor 1254	1.37	0.112	µg/g
Aroclor 1260	0.447	0.112	µg/g
Total PCB Results > PQL	1.817		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-12 NEA ID: 9701674
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

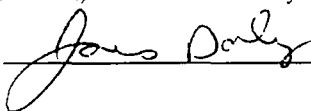
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.112	µg/g
Aroclor 1221	ND	0.112	µg/g
Aroclor 1232	ND	0.112	µg/g
Aroclor 1242	ND	0.112	µg/g
Aroclor 1248	ND	0.112	µg/g
Aroclor 1254	1.70	0.112	µg/g
Aroclor 1260	0.480	0.112	µg/g
Total PCB Results > PQL	2.18		

Date Analysis Completed

30-APR-97

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PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-13 NEA ID: 9701675
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	2 10	0 110	µg/g
Aroclor 1260	0 590	0 110	µg/g
Total PCB Results > PQL	2 69		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-14 NEA ID: 9701676
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	ND	0 109	µg/g
Aroclor 1254	1 20	0 109	µg/g
Aroclor 1260	0 399	0 109	µg/g
Total PCB Results > PQL	1 599		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
MAY 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV106-14 (DUP)	<u>NEA ID:</u>	9701676DUP
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/15/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/17/97 <u>TIME:</u> 10:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.106	µg/g
Aroclor 1221	ND	0.106	µg/g
Aroclor 1232	ND	0.106	µg/g
Aroclor 1242	ND	0.106	µg/g
Aroclor 1248	ND	0.106	µg/g
Aroclor 1254	1.13	0.106	µg/g
Aroclor 1260	0.349	0.106	µg/g
Total PCB Results > PQL	1.48		

Date Analysis Completed 30-APR-97

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-15 NEA ID: 9701677
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	1 55	0 110	µg/g
Aroclor 1260	0 363	0 110	µg/g
Total PCB Results > PQL	1 913		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-16 NEA ID: 9701678
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.111	µg/g
Aroclor 1221	ND	0.111	µg/g
Aroclor 1232	ND	0.111	µg/g
Aroclor 1242	ND	0.111	µg/g
Aroclor 1248	ND	0.111	µg/g
Aroclor 1254	1.80	0.111	µg/g
Aroclor 1260	0.390	0.111	µg/g
Total PCB Results > PQL	2.19		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-17	NEA ID:	9701679		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 208	µg/g
Aroclor 1221	ND	0 208	µg/g
Aroclor 1232	ND	0 208	µg/g
Aroclor 1242	ND	0 208	µg/g
Aroclor 1248	ND	0 208	µg/g
Aroclor 1254	2 18	0 208	µg/g
Aroclor 1260	0 609	0 208	µg/g
Total PCB Results > PQL	2 789		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-18	NEA ID:	9701680		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/15/97	TIME:	N/A
DATE RECEIVED:	04/17/97	TIME:	10 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	1 72	0 111	µg/g
Aroclor 1260	1 02	0 111	µg/g
Total PCB Results > PQL	2 74		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV106-19	NEA ID:	9701805		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	2 05	0 110	µg/g
Aroclor 1260	0 620	0 110	µg/g
Total PCB Results > PQL	2 67		

Date Analysis Completed

23-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-106-20	NEA ID:	9702093		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/24/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.324	µg/g
Aroclor 1221	ND	0.324	µg/g
Aroclor 1232	ND	0.324	µg/g
Aroclor 1242	ND	0.324	µg/g
Aroclor 1248	ND	0.324	µg/g
Aroclor 1254	1.62	0.324	µg/g
Aroclor 1260	0.408	0.324	µg/g
Total PCB Results > PQL	2.028		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV106-21 NEA ID: 9701807
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 112	µg/g
Aroclor 1221	ND	0 112	µg/g
Aroclor 1232	ND	0 112	µg/g
Aroclor 1242	ND	0 112	µg/g
Aroclor 1248	ND	0 112	µg/g
Aroclor 1254	0 694	0 112	µg/g
Aroclor 1260	0 245	0 112	µg/g
Total PCB Results > PQL	0 939		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-106-22	NEA ID:	9703398		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	05/21/97	TIME:	N/A
DATE RECEIVED:	05/28/97	TIME:	13 00	PROJECT:	SCHLUMBERGER
SAMPLED BY:	N/A	LOCATION:	LAKE HORTWELL, S C		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 112	µg/g
Aroclor 1221	ND	0 112	µg/g
Aroclor 1232	ND	0 112	µg/g
Aroclor 1242	ND	0 112	µg/g
Aroclor 1248	ND	0 112	µg/g
Aroclor 1254	1 46	0 112	µg/g
Aroclor 1260	0 346	0 112	µg/g
Total PCB Results > PQL	1 806		

Date Analysis Completed

5-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS

June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-106-23	NEA ID:	9703399		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	05/21/97	TIME:	N/A
DATE RECEIVED:	05/28/97	TIME:	13 00	PROJECT:	SCHLUMBERGER
SAMPLED BY:	N/A	LOCATION:	LAKE HORTWELL, S C		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	1 49	0 107	µg/g
Aroclor 1260	0 215	0 107	µg/g
Total PCB Results > PQL	1 705		

Date Analysis Completed

5-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-106-24	NEA ID:	9703397		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	05/21/97	TIME:	N/A
DATE RECEIVED:	05/28/97	TIME:	13 00	PROJECT:	SCHLUMBERGER
SAMPLED BY:	N/A	LOCATION:	LAKE HORTWELL, S C		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

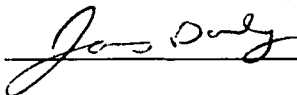
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	1 12	0 110	µg/g
Aroclor 1260	0 222	0 110	µg/g
Total PCB Results > PQL	1 342		

Date Analysis Completed

4-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS
May 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV532-01 NEA ID: 9701681
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97 TIME: N/A
DATE RECEIVED: 04/17/97 TIME: 10 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.327	µg/g
Aroclor 1221	ND	0.327	µg/g
Aroclor 1232	ND	0.327	µg/g
Aroclor 1242	ND	0.327	µg/g
Aroclor 1248	ND	0.327	µg/g
Aroclor 1254	4.33	0.327	µg/g
Aroclor 1260	0.822	0.327	µg/g
Total PCB Results > PQL	5.152		

Date Analysis Completed

30-APR-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-02	NEA ID:	9701774		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	0 637	0 108	µg/g
Aroclor 1260	0 294	0 108	µg/g
Total PCB Results > REPORTING LIMIT	0 931		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-03	NEA ID:	9701775		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	1 22	0 108	µg/g
Aroclor 1260	0 283	0 108	µg/g
Total PCB Results > REPORTING LIMIT	1 5		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-04	NEA ID:	9701776		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.413	µg/g
Aroclor 1221	ND	0.413	µg/g
Aroclor 1232	ND	0.413	µg/g
Aroclor 1242	ND	0.413	µg/g
Aroclor 1248	ND	0.413	µg/g
Aroclor 1254	1.24	0.413	µg/g
Aroclor 1260	0.414	0.413	µg/g
Total PCB Results > REPORTING LIMIT	1.65		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-05	NEA ID:	9701777		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.422	µg/g
Aroclor 1221	ND	0.422	µg/g
Aroclor 1232	ND	0.422	µg/g
Aroclor 1242	ND	0.422	µg/g
Aroclor 1248	ND	0.422	µg/g
Aroclor 1254	1.19	0.422	µg/g
Aroclor 1260	0.553	0.422	µg/g
Total PCB Results > REPORTING LIMIT	1.74		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-06	NEA ID:	9701778		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

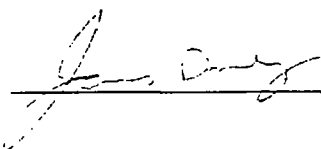
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 106	µg/g
Aroclor 1221	ND	0 106	µg/g
Aroclor 1232	ND	0 106	µg/g
Aroclor 1242	ND	0 106	µg/g
Aroclor 1248	ND	0 106	µg/g
Aroclor 1254	0 270	0 106	µg/g
Aroclor 1260	0 181	0 106	µg/g
Total PCB Results > REPORTING LIMIT	0 451		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV532-07 NEA ID: 9701779
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

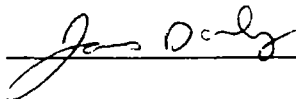
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 416	µg/g
Aroclor 1221	ND	0 416	µg/g
Aroclor 1232	ND	0 416	µg/g
Aroclor 1242	ND	0 416	µg/g
Aroclor 1248	ND	0 416	µg/g
Aroclor 1254	2 23	0 416	µg/g
Aroclor 1260	0 493	0 416	µg/g
Total PCB Results > PQL	2 723		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV532-08 NEA ID: 9701780
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.621	µg/g
Aroclor 1221	ND	0.621	µg/g
Aroclor 1232	ND	0.621	µg/g
Aroclor 1242	ND	0.621	µg/g
Aroclor 1248	ND	0.621	µg/g
Aroclor 1254	3.86	0.621	µg/g
Aroclor 1260	0.713	0.621	µg/g
Total PCB Results > PQL	4.573		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-09	NEA ID:	9701781		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080. Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	ND	0 109	µg/g
Aroclor 1254	0 346	0 109	µg/g
Aroclor 1260	0 257	0 109	µg/g
Total PCB Results > REPORTING LIMIT	0 603		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-10	NEA ID:	9701782		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.219	µg/g
Aroclor 1221	ND	0.219	µg/g
Aroclor 1232	ND	0.219	µg/g
Aroclor 1242	ND	0.219	µg/g
Aroclor 1248	ND	0.219	µg/g
Aroclor 1254	0.762	0.219	µg/g
Aroclor 1260	0.286	0.219	µg/g
Total PCB Results > REPORTING LIMIT	1.05		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV532-11	NEA ID:	9701783		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

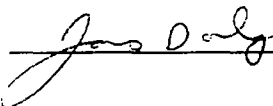
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.219	µg/g
Aroclor 1221	ND	0.219	µg/g
Aroclor 1232	ND	0.219	µg/g
Aroclor 1242	ND	0.219	µg/g
Aroclor 1248	ND	0.219	µg/g
Aroclor 1254	1.08	0.219	µg/g
Aroclor 1260	0.357	0.219	µg/g
Total PCB Results > PQL	1.437		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature:



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-532-12	NEA ID:	9702091		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/24/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

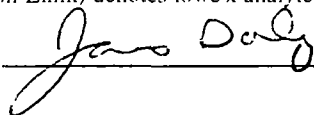
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 103	µg/g
Aroclor 1221	ND	0 103	µg/g
Aroclor 1232	ND	0 103	µg/g
Aroclor 1242	ND	0 103	µg/g
Aroclor 1248	ND	0 103	µg/g
Aroclor 1254	0 548	0 103	µg/g
Aroclor 1260	0 166	0 103	µg/g
Total PCB Results > PQL	0 714		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-13	NEA ID:	9701785		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.653	µg/g
Aroclor 1221	ND	0.653	µg/g
Aroclor 1232	ND	0.653	µg/g
Aroclor 1242	ND	0.653	µg/g
Aroclor 1248	ND	0.653	µg/g
Aroclor 1254	2.69	0.653	µg/g
Aroclor 1260	0.667	0.653	µg/g
Total PCB Results > REPORTING LIMIT	3.36		

Date Analysis Completed

13-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV532-14	NEA ID:	9701787		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 204	µg/g
Aroclor 1221	ND	0 204	µg/g
Aroclor 1232	ND	0 204	µg/g
Aroclor 1242	ND	0 204	µg/g
Aroclor 1248	ND	0 204	µg/g
Aroclor 1254	0 819	0 204	µg/g
Aroclor 1260	ND	0 204	µg/g
Total PCB Results > PQL	0 819		

Date Analysis Completed

13-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV532-15	NEA ID:	9701788		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.325	µg/g
Aroclor 1221	ND	0.325	µg/g
Aroclor 1232	ND	0.325	µg/g
Aroclor 1242	ND	0.325	µg/g
Aroclor 1248	ND	0.325	µg/g
Aroclor 1254	1.16	0.325	µg/g
Aroclor 1260	ND	0.325	µg/g
Total PCB Results > PQL	1.16		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-16	NEA ID:	9701811		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080. Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.551	µg/g
Aroclor 1221	ND	0.551	µg/g
Aroclor 1232	ND	0.551	µg/g
Aroclor 1242	ND	0.551	µg/g
Aroclor 1248	ND	0.551	µg/g
Aroclor 1254	6.53	0.551	µg/g
Aroclor 1260	1.08	0.551	µg/g
Total PCB Results > REPORTING LIMIT	7.61		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
MAY 14, 1997

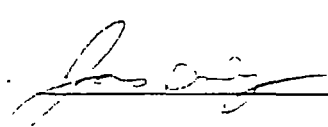
ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV532-16 (DUP)	<u>NEA ID:</u>	9701811		
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/16/97	<u>TIME:</u>	N/A
<u>DATE RECEIVED:</u>	04/21/97	<u>TIME:</u>	11:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER		
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.555	µg/g
Aroclor 1221	ND	0.555	µg/g
Aroclor 1232	ND	0.555	µg/g
Aroclor 1242	ND	0.555	µg/g
Aroclor 1248	ND	0.555	µg/g
Aroclor 1254	5.85	0.555	µg/g
Aroclor 1260	0.919	0.555	µg/g
Total PCB Results > PQL	6.77		
Date Analysis Completed	12-MAY-97		

Authorized Signature: 

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-17	NEA ID:	9701812		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.213	µg/g
Aroclor 1221	ND	0.213	µg/g
Aroclor 1232	ND	0.213	µg/g
Aroclor 1242	ND	0.213	µg/g
Aroclor 1248	ND	0.213	µg/g
Aroclor 1254	2.93	0.213	µg/g
Aroclor 1260	0.579	0.213	µg/g
Total PCB Results > REPORTING LIMIT	3.51		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-18	NEA ID:	9701813		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.112	µg/g
Aroclor 1221	ND	0.112	µg/g
Aroclor 1232	ND	0.112	µg/g
Aroclor 1242	ND	0.112	µg/g
Aroclor 1248	ND	0.112	µg/g
Aroclor 1254	2.01	0.112	µg/g
Aroclor 1260	0.379	0.112	µg/g
Total PCB Results > REPORTING LIMIT	2.39		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-19	NEA ID:	9701814		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.427	µg/g
Aroclor 1221	ND	0.427	µg/g
Aroclor 1232	ND	0.427	µg/g
Aroclor 1242	ND	0.427	µg/g
Aroclor 1248	ND	0.427	µg/g
Aroclor 1254	5.77	0.427	µg/g
Aroclor 1260	0.893	0.427	µg/g
Total PCB Results > REPORTING LIMIT	6.66		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV532-20	NEA ID:	9701815		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 106	µg/g
Aroclor 1221	ND	0 106	µg/g
Aroclor 1232	ND	0 106	µg/g
Aroclor 1242	ND	0 106	µg/g
Aroclor 1248	ND	0 106	µg/g
Aroclor 1254	1 62	0 106	µg/g
Aroclor 1260	0 541	0 106	µg/g
Total PCB Results > PQL	2 161		

Date Analysis Completed

30-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
JUNE 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV532-20 (DUPLICATE)	<u>NEA ID:</u>	9701815 (DUP)
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/16/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/21/97 <u>TIME:</u> 11:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.104	µg/g
Aroclor 1221	ND	0.104	µg/g
Aroclor 1232	ND	0.104	µg/g
Aroclor 1242	ND	0.104	µg/g
Aroclor 1248	ND	0.104	µg/g
Aroclor 1254	1.62	0.104	µg/g
Aroclor 1260	0.533	0.104	µg/g
Total PCB Results > PQL	2.15		
Date Analysis Completed	30-MAY-97		

Authorized Signature: _____

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-21	NEA ID:	9701816		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.654	µg/g
Aroclor 1221	ND	0.654	µg/g
Aroclor 1232	ND	0.654	µg/g
Aroclor 1242	ND	0.654	µg/g
Aroclor 1248	ND	0.654	µg/g
Aroclor 1254	8.16	0.654	µg/g
Aroclor 1260	1.24	0.654	µg/g
Total PCB Results > REPORTING LIMIT	9.4		

Date Analysis Completed

12-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV532-22 NEA ID: 9701817
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

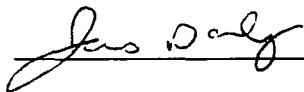
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	1 43	0 111	µg/g
Aroclor 1260	0 304	0 111	µg/g
Total PCB Results > PQL	1 734		

Date Analysis Completed

23-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-532-23	NEA ID:	9702094		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/24/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 221	µg/g
Aroclor 1221	ND	0 221	µg/g
Aroclor 1232	ND	0 221	µg/g
Aroclor 1242	ND	0 221	µg/g
Aroclor 1248	ND	0 221	µg/g
Aroclor 1254	1 30	0 221	µg/g
Aroclor 1260	0 421	0 221	µg/g
Total PCB Results > PQL	1 721		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-532-24	NEA ID:	9702095		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/24/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

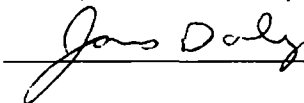
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 222	µg/g
Aroclor 1221	ND	0 222	µg/g
Aroclor 1232	ND	0 222	µg/g
Aroclor 1242	ND	0 222	µg/g
Aroclor 1248	ND	0 222	µg/g
Aroclor 1254	1 56	0 222	µg/g
Aroclor 1260	0 363	0 222	µg/g
Total PCB Results > PQL	1 923		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-25	NEA ID:	9701820		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

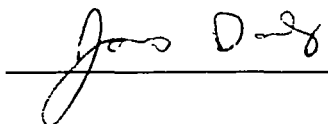
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.511	µg/g
Aroclor 1221	ND	0.511	µg/g
Aroclor 1232	ND	0.511	µg/g
Aroclor 1242	ND	0.511	µg/g
Aroclor 1248	ND	0.511	µg/g
Aroclor 1254	2.86	0.511	µg/g
Aroclor 1260	0.554	0.511	µg/g
Total PCB Results > REPORTING LIMIT	3.41		

Date Analysis Completed

16-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV532-26	NEA ID:	9701821		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 208	µg/g
Aroclor 1221	ND	0 208	µg/g
Aroclor 1232	ND	0 208	µg/g
Aroclor 1242	ND	0 208	µg/g
Aroclor 1248	ND	0 208	µg/g
Aroclor 1254	1 01	0 208	µg/g
Aroclor 1260	ND	0 208	µg/g
Total PCB Results > REPORTING LIMIT	1 01		

Date Analysis Completed

16-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
MAY 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV532-26 (DUPLICATE) NEA ID: 9701821 (DUP)
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11:00 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.219	µg/g
Aroclor 1221	ND	0.219	µg/g
Aroclor 1232	ND	0.219	µg/g
Aroclor 1242	ND	0.219	µg/g
Aroclor 1248	ND	0.219	µg/g
Aroclor 1254	1.09	0.219	µg/g
Aroclor 1260	ND	0.219	µg/g
Total PCB Results > PQL	1.09		
Date Analysis Completed	16-MAY-97		

Authorized Signature. _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS

June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV532-27	NEA ID:	9701826		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

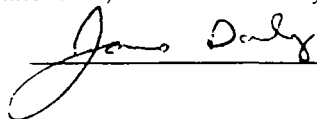
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 218	µg/g
Aroclor 1221	ND	0 218	µg/g
Aroclor 1232	ND	0 218	µg/g
Aroclor 1242	ND	0 218	µg/g
Aroclor 1248	ND	0 218	µg/g
Aroclor 1254	3 15	0 218	µg/g
Aroclor 1260	0 610	0 218	µg/g
Total PCB Results > PQL	3 76		

Date Analysis Completed

9-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-01	NEA ID:	9701791		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 315	µg/g
Aroclor 1221	ND	0 315	µg/g
Aroclor 1232	ND	0 315	µg/g
Aroclor 1242	ND	0 315	µg/g
Aroclor 1248	ND	0 315	µg/g
Aroclor 1254	0 790	0 315	µg/g
Aroclor 1260	ND	0 315	µg/g
Total PCB Results > PQL	0 79		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-02	NEA ID:	9701789		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.434	µg/g
Aroclor 1221	ND	0.434	µg/g
Aroclor 1232	ND	0.434	µg/g
Aroclor 1242	ND	0.434	µg/g
Aroclor 1248	ND	0.434	µg/g
Aroclor 1254	1.00	0.434	µg/g
Aroclor 1260	ND	0.434	µg/g
Total PCB Results > PQL	1		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-03	NEA ID:	9701790		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.527	µg/g
Aroclor 1221	ND	0.527	µg/g
Aroclor 1232	ND	0.527	µg/g
Aroclor 1242	ND	0.527	µg/g
Aroclor 1248	ND	0.527	µg/g
Aroclor 1254	1.76	0.527	µg/g
Aroclor 1260	ND	0.527	µg/g
Total PCB Results > PQL	1.76		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-04 NEA ID: 9701793
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.764	µg/g
Aroclor 1221	ND	0.764	µg/g
Aroclor 1232	ND	0.764	µg/g
Aroclor 1242	ND	0.764	µg/g
Aroclor 1248	ND	0.764	µg/g
Aroclor 1254	2.89	0.764	µg/g
Aroclor 1260	ND	0.764	µg/g
Total PCB Results > PQL	2.89		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-05 NEA ID: 9701792
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 315	µg/g
Aroclor 1221	ND	0 315	µg/g
Aroclor 1232	ND	0 315	µg/g
Aroclor 1242	ND	0 315	µg/g
Aroclor 1248	ND	0 315	µg/g
Aroclor 1254	1 06	0 315	µg/g
Aroclor 1260	0 326	0 315	µg/g
Total PCB Results > PQL	1 386		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-06	NEA ID:	9701794		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 208	µg/g
Aroclor 1221	ND	0 208	µg/g
Aroclor 1232	ND	0 208	µg/g
Aroclor 1242	ND	0 208	µg/g
Aroclor 1248	ND	0 208	µg/g
Aroclor 1254	0 683	0 208	µg/g
Aroclor 1260	ND	0 208	µg/g
Total PCB Results > PQL	0 683		

Date Analysis Completed

14-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-07	NEA ID:	9701795		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 326	µg/g
Aroclor 1221	ND	0 326	µg/g
Aroclor 1232	ND	0 326	µg/g
Aroclor 1242	ND	0 326	µg/g
Aroclor 1248	ND	0 326	µg/g
Aroclor 1254	0 715	0 326	µg/g
Aroclor 1260	ND	0 326	µg/g
Total PCB Results > PQL	0 715		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-08	NEA ID:	9701796		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 105	µg/g
Aroclor 1221	ND	0 105	µg/g
Aroclor 1232	ND	0 105	µg/g
Aroclor 1242	ND	0 105	µg/g
Aroclor 1248	ND	0 105	µg/g
Aroclor 1254	0 320	0 105	µg/g
Aroclor 1260	0 107	0 105	µg/g
Total PCB Results > PQL	0 427		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-09 NEA ID: 9701797
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.207	µg/g
Aroclor 1221	ND	0.207	µg/g
Aroclor 1232	ND	0.207	µg/g
Aroclor 1242	ND	0.207	µg/g
Aroclor 1248	ND	0.207	µg/g
Aroclor 1254	0.301	0.207	µg/g
Aroclor 1260	ND	0.207	µg/g
Total PCB Results > PQL	0.301		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-10	NEA ID:	9701798		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J. ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	0 720	0 107	µg/g
Aroclor 1260	0 253	0 107	µg/g
Total PCB Results > PQL	0 973		

Date Analysis Completed

22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-11	NEA ID:	9701799		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.110	µg/g
Aroclor 1221	ND	0.110	µg/g
Aroclor 1232	ND	0.110	µg/g
Aroclor 1242	ND	0.110	µg/g
Aroclor 1248	ND	0.110	µg/g
Aroclor 1254	1.77	0.110	µg/g
Aroclor 1260	0.601	0.110	µg/g
Total PCB Results > PQL	2.371		

Date Analysis Completed

22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS

June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-12	NEA ID:	9701800		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	1 05	0 110	µg/g
Aroclor 1260	0 389	0 110	µg/g
Total PCB Results > PQL	1 439		

Date Analysis Completed

22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-13	NEA ID:	9701801		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	ND	0 109	µg/g
Aroclor 1254	0 240	0 109	µg/g
Aroclor 1260	ND	0 109	µg/g
Total PCB Results > PQL	0 24		

Date Analysis Completed

22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-14	NEA ID:	9701802		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	0 493	0 107	µg/g
Aroclor 1260	0 163	0 107	µg/g
Total PCB Results > PQL	0 656		

Date Analysis Completed

22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-15	NEA ID:	9701803		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	0 472	0 111	µg/g
Aroclor 1260	0 135	0 111	µg/g
Total PCB Results > PQL	0 607		

Date Analysis Completed

22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV355-16	NEA ID:	9701822		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 213	µg/g
Aroclor 1221	ND	0 213	µg/g
Aroclor 1232	ND	0 213	µg/g
Aroclor 1242	ND	0 213	µg/g
Aroclor 1248	ND	0 213	µg/g
Aroclor 1254	0 742	0 213	µg/g
Aroclor 1260	ND	0 213	µg/g
Total PCB Results > PQL	0 742		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
MAY 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-16 (DUPLICATE) NEA ID: 9701822 (DUP)
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11:00 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.214	µg/g
Aroclor 1221	ND	0.214	µg/g
Aroclor 1232	ND	0.214	µg/g
Aroclor 1242	ND	0.214	µg/g
Aroclor 1248	ND	0.214	µg/g
Aroclor 1254	0.420	0.214	µg/g
Aroclor 1260	ND	0.214	µg/g
Total PCB Results > PQL	0.420		
Date Analysis Completed	15-MAY-97		

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-17	NEA ID:	9701823		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 322	µg/g
Aroclor 1221	ND	0 322	µg/g
Aroclor 1232	ND	0 322	µg/g
Aroclor 1242	ND	0 322	µg/g
Aroclor 1248	ND	0 322	µg/g
Aroclor 1254	0 522	0 322	µg/g
Aroclor 1260	ND	0 322	µg/g
Total PCB Results > PQL	0 522		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Robert E Wagner, Laboratory Director
Northeast Analytical, Inc.

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CERTIFICATE OF ANALYSIS May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-18	NEA ID:	9701824		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.331	µg/g
Aroclor 1221	ND	0.331	µg/g
Aroclor 1232	ND	0.331	µg/g
Aroclor 1242	ND	0.331	µg/g
Aroclor 1248	ND	0.331	µg/g
Aroclor 1254	0.854	0.331	µg/g
Aroclor 1260	ND	0.331	µg/g
Total PCB Results > PQL	0.854		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-19	NEA ID:	9701825		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 218	µg/g
Aroclor 1221	ND	0 218	µg/g
Aroclor 1232	ND	0 218	µg/g
Aroclor 1242	ND	0 218	µg/g
Aroclor 1248	ND	0 218	µg/g
Aroclor 1254	0 495	0 218	µg/g
Aroclor 1260	ND	0 218	µg/g
Total PCB Results > PQL	0 495		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-20 NEA ID: 9701856
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 216	µg/g
Aroclor 1221	ND	0 216	µg/g
Aroclor 1232	ND	0 216	µg/g
Aroclor 1242	ND	0 216	µg/g
Aroclor 1248	ND	0 216	µg/g
Aroclor 1254	0 503	0 216	µg/g
Aroclor 1260	ND	0 216	µg/g
Total PCB Results > PQL	0 503		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature.

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-21 NEA ID: 9701857
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	1 08	µg/g
Aroclor 1221	ND	1 08	µg/g
Aroclor 1232	ND	1 08	µg/g
Aroclor 1242	ND	1 08	µg/g
Aroclor 1248	ND	1 08	µg/g
Aroclor 1254	3 32	1 08	µg/g
Aroclor 1260	ND	1 08	µg/g
Total PCB Results > PQL	3 32		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-22 NEA ID: 9701858
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 105	µg/g
Aroclor 1221	ND	0 105	µg/g
Aroclor 1232	ND	0 105	µg/g
Aroclor 1242	ND	0 105	µg/g
Aroclor 1248	ND	0 105	µg/g
Aroclor 1254	0 533	0 105	µg/g
Aroclor 1260	0 223	0 105	µg/g
Total PCB Results > PQL	0 756		

Date Analysis Completed

23-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JUNE 2, 1997

ERM SOUTHEAST, INC.

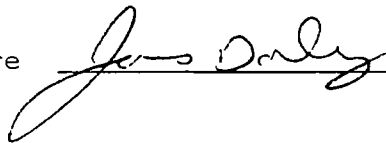
215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV535-33 (DUPLICATE) NEA ID: 9701858 (DUP)
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11:00 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.108	µg/g
Aroclor 1221	ND	0.108	µg/g
Aroclor 1232	ND	0.108	µg/g
Aroclor 1242	ND	0.108	µg/g
Aroclor 1248	ND	0.108	µg/g
Aroclor 1254	0.564	0.108	µg/g
Aroclor 1260	0.239	0.108	µg/g
Total PCB Results > PQL	0.803		
Date Analysis Completed	23-MAY-97		

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV535-23	NEA ID:	9701859		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 112	µg/g
Aroclor 1221	ND	0 112	µg/g
Aroclor 1232	ND	0 112	µg/g
Aroclor 1242	ND	0 112	µg/g
Aroclor 1248	ND	0 112	µg/g
Aroclor 1254	0 677	0 112	µg/g
Aroclor 1260	0 285	0 112	µg/g
Total PCB Results > PQL	0 962		

Date Analysis Completed

23-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-535-24	NEA ID:	9702097		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/25/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

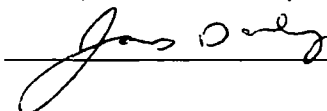
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.779	µg/g
Aroclor 1221	ND	0.779	µg/g
Aroclor 1232	ND	0.779	µg/g
Aroclor 1242	ND	0.779	µg/g
Aroclor 1248	ND	0.779	µg/g
Aroclor 1254	6.43	0.779	µg/g
Aroclor 1260	1.16	0.779	µg/g
Total PCB Results > PQL	7.59		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-01	NEA ID:	9701861		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	0 425	0 110	µg/g
Aroclor 1260	0 171	0 110	µg/g
Total PCB Results > PQL	0 596		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-02	NEA ID:	9701862		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

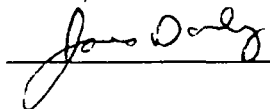
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	1 08	0 110	µg/g
Aroclor 1260	0 278	0 110	µg/g
Total PCB Results > PQL	1 358		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-03 NEA ID: 9701863
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.861	µg/g
Aroclor 1221	ND	0.861	µg/g
Aroclor 1232	ND	0.861	µg/g
Aroclor 1242	ND	0.861	µg/g
Aroclor 1248	ND	0.861	µg/g
Aroclor 1254	3.13	0.861	µg/g
Aroclor 1260	ND	0.861	µg/g
Total PCB Results > PQL	3.13		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-04 NEA ID: 9701864
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	1 08	µg/g
Aroclor 1221	ND	1 08	µg/g
Aroclor 1232	ND	1 08	µg/g
Aroclor 1242	ND	1 08	µg/g
Aroclor 1248	ND	1 08	µg/g
Aroclor 1254	3 15	1 08	µg/g
Aroclor 1260	ND	1 08	µg/g
Total PCB Results > PQL	3 15		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
MAY 23, 1997

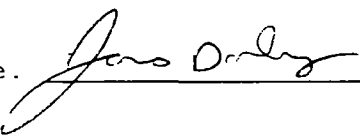
ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-04 (DUPLICATE) NEA ID: 9701864 (DUP)
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11:00 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	1.12	µg/g
Aroclor 1221	ND	1.12	µg/g
Aroclor 1232	ND	1.12	µg/g
Aroclor 1242	ND	1.12	µg/g
Aroclor 1248	ND	1.12	µg/g
Aroclor 1254	3.08	1.12	µg/g
Aroclor 1260	ND	1.12	µg/g
Total PCB Results > PQL	3.08		
Date Analysis Completed	18-MAY-97		

Authorized Signature. 

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-05 NEA ID: 9701865
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	2 02	0 110	µg/g
Aroclor 1260	0 416	0 110	µg/g
Total PCB Results > PQL	2 436		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature:



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-06	NEA ID:	9701866		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 112	µg/g
Aroclor 1221	ND	0 112	µg/g
Aroclor 1232	ND	0 112	µg/g
Aroclor 1242	ND	0 112	µg/g
Aroclor 1248	ND	0 112	µg/g
Aroclor 1254	1 87	0 112	µg/g
Aroclor 1260	0 647	0 112	µg/g
Total PCB Results > PQL	2 517		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-07	NEA ID:	9701867		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.315	µg/g
Aroclor 1221	ND	0.315	µg/g
Aroclor 1232	ND	0.315	µg/g
Aroclor 1242	ND	0.315	µg/g
Aroclor 1248	ND	0.315	µg/g
Aroclor 1254	1.12	0.315	µg/g
Aroclor 1260	ND	0.315	µg/g
Total PCB Results > PQL	1.12		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-08	NEA ID:	9701868		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.536	µg/g
Aroclor 1221	ND	0.536	µg/g
Aroclor 1232	ND	0.536	µg/g
Aroclor 1242	ND	0.536	µg/g
Aroclor 1248	ND	0.536	µg/g
Aroclor 1254	1.53	0.536	µg/g
Aroclor 1260	ND	0.536	µg/g
Total PCB Results > PQL	1.53		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-09 NEA ID: 9701869
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.336	µg/g
Aroclor 1221	ND	0.336	µg/g
Aroclor 1232	ND	0.336	µg/g
Aroclor 1242	ND	0.336	µg/g
Aroclor 1248	ND	0.336	µg/g
Aroclor 1254	0.985	0.336	µg/g
Aroclor 1260	0.376	0.336	µg/g
Total PCB Results > PQL	1.361		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-10	NEA ID:	9701870		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

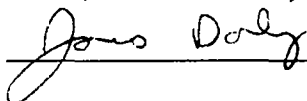
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	0 161	0 108	µg/g
Aroclor 1260	ND	0 108	µg/g
Total PCB Results > PQL	0 161		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-11 NEA ID: 9701871
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

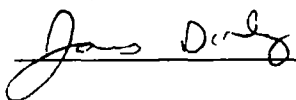
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	0 210	0 108	µg/g
Aroclor 1260	ND	0 108	µg/g
Total PCB Results > PQL	0 21		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS

June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-12	NEA ID:	9701872		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 112	µg/g
Aroclor 1221	ND	0 112	µg/g
Aroclor 1232	ND	0 112	µg/g
Aroclor 1242	ND	0 112	µg/g
Aroclor 1248	ND	0 112	µg/g
Aroclor 1254	0 408	0 112	µg/g
Aroclor 1260	0 126	0 112	µg/g
Total PCB Results > PQL	0 534		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-13	NEA ID:	9701873		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

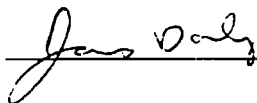
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	ND	0 111	µg/g
Aroclor 1260	ND	0 111	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-14	NEA ID:	9701876		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	0 112	0 108	µg/g
Aroclor 1260	ND	0 108	µg/g
Total PCB Results > PQL	0 112		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-15	NEA ID:	9701877		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	0 235	0 108	µg/g
Aroclor 1260	0 115	0 108	µg/g
Total PCB Results > PQL	0 35		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
MAY 23, 1997

ERM SOUTHEAST, INC.

215 CENTerview DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-15 (DUPLICATE) NEA ID: 9701877 (DUP)
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11:00 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.110	µg/g
Aroclor 1221	ND	0.110	µg/g
Aroclor 1232	ND	0.110	µg/g
Aroclor 1242	ND	0.110	µg/g
Aroclor 1248	ND	0.110	µg/g
Aroclor 1254	0.187	0.110	µg/g
Aroclor 1260	0.110	0.110	µg/g
Total PCB Results > PQL	0.297		
Date Analysis Completed	18-MAY-97		

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-16 NEA ID: 9701878
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.111	µg/g
Aroclor 1221	ND	0.111	µg/g
Aroclor 1232	ND	0.111	µg/g
Aroclor 1242	ND	0.111	µg/g
Aroclor 1248	ND	0.111	µg/g
Aroclor 1254	ND	0.111	µg/g
Aroclor 1260	ND	0.111	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-17 NEA ID: 9701879
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

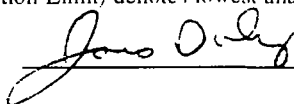
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 102	µg/g
Aroclor 1221	ND	0 102	µg/g
Aroclor 1232	ND	0 102	µg/g
Aroclor 1242	ND	0 102	µg/g
Aroclor 1248	ND	0 102	µg/g
Aroclor 1254	ND	0 102	µg/g
Aroclor 1260	ND	0 102	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-18 NEA ID: 9701880
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

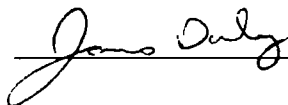
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 112	µg/g
Aroclor 1221	ND	0 112	µg/g
Aroclor 1232	ND	0 112	µg/g
Aroclor 1242	ND	0 112	µg/g
Aroclor 1248	ND	0 112	µg/g
Aroclor 1254	0 281	0 112	µg/g
Aroclor 1260	0 180	0 112	µg/g
Total PCB Results > PQL	0 461		

Date Analysis Completed

26-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-19	NEA ID:	9701881		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11:00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	0 141	0 111	µg/g
Aroclor 1260	ND	0 111	µg/g
Total PCB Results > PQL	0 141		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-20	NEA ID:	9701882		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	0 196	0 108	µg/g
Aroclor 1260	0 115	0 108	µg/g
Total PCB Results > PQL	0 311		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-21	NEA ID:	9701883		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

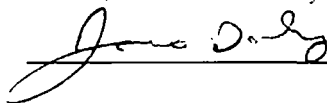
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	ND	0 107	µg/g
Aroclor 1260	ND	0 107	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed

26-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV641-22 NEA ID: 9701884
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/16/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	ND	0 107	µg/g
Aroclor 1260	ND	0 107	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS July 23, 1997

ERM SOUTHEAST, INC.

7106 CROSSROADS BLVD., SUITE 228
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-23	NEA ID:	9701885		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

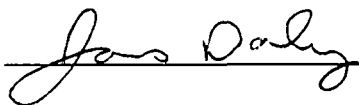
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	ND	0 109	µg/g
Aroclor 1254	ND	0 109	µg/g
Aroclor 1260	ND	0 109	µg/g
Total PCB Results > REPORTING LIMIT	0		

Date Analysis Completed

15-JUL-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-24	NEA ID:	9701886		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/16/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	0 370	0 107	µg/g
Aroclor 1260	0 117	0 107	µg/g
Total PCB Results > PQL	0 487		

Date Analysis Completed

24-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-25	NEA ID:	9701854		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11:00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.110	µg/g
Aroclor 1221	ND	0.110	µg/g
Aroclor 1232	ND	0.110	µg/g
Aroclor 1242	ND	0.110	µg/g
Aroclor 1248	ND	0.110	µg/g
Aroclor 1254	ND	0.110	µg/g
Aroclor 1260	ND	0.110	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed

23-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV641-26	NEA ID:	9701855		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 106	µg/g
Aroclor 1221	ND	0 106	µg/g
Aroclor 1232	ND	0 106	µg/g
Aroclor 1242	ND	0 106	µg/g
Aroclor 1248	ND	0 106	µg/g
Aroclor 1254	ND	0 106	µg/g
Aroclor 1260	ND	0 106	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed

23-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS

June 10, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV-641-27	NEA ID:	9702096		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/25/97	TIME:	N/A
DATE RECEIVED:	04/26/97	TIME:	10 30	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

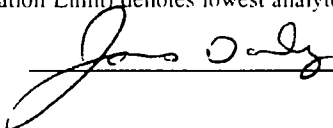
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.547	µg/g
Aroclor 1221	ND	0.547	µg/g
Aroclor 1232	ND	0.547	µg/g
Aroclor 1242	ND	0.547	µg/g
Aroclor 1248	ND	0.547	µg/g
Aroclor 1254	5.43	0.547	µg/g
Aroclor 1260	1.04	0.547	µg/g
Total PCB Results > PQL	6.47		

Date Analysis Completed

25-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS
June 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV642-01 NEA ID: 9701828
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11.00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

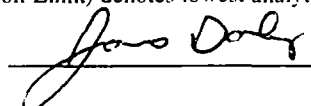
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 208	µg/g
Aroclor 1221	ND	0 208	µg/g
Aroclor 1232	ND	0 208	µg/g
Aroclor 1242	ND	0 208	µg/g
Aroclor 1248	ND	0 208	µg/g
Aroclor 1254	3 43	0 208	µg/g
Aroclor 1260	0 752	0 208	µg/g
Total PCB Results > PQL	4 182		

Date Analysis Completed

30-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV642-02 NEA ID: 9701829
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/17/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.329	µg/g
Aroclor 1221	ND	0.329	µg/g
Aroclor 1232	ND	0.329	µg/g
Aroclor 1242	ND	0.329	µg/g
Aroclor 1248	ND	0.329	µg/g
Aroclor 1254	0.819	0.329	µg/g
Aroclor 1260	ND	0.329	µg/g
Total PCB Results > PQL	0.819		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV642-03	NEA ID:	9701830		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.324	µg/g
Aroclor 1221	ND	0.324	µg/g
Aroclor 1232	ND	0.324	µg/g
Aroclor 1242	ND	0.324	µg/g
Aroclor 1248	ND	0.324	µg/g
Aroclor 1254	1.30	0.324	µg/g
Aroclor 1260	0.382	0.324	µg/g
Total PCB Results > PQL	1.682		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV642-04	NEA ID:	9701831		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.417	µg/g
Aroclor 1221	ND	0.417	µg/g
Aroclor 1232	ND	0.417	µg/g
Aroclor 1242	ND	0.417	µg/g
Aroclor 1248	ND	0.417	µg/g
Aroclor 1254	1.10	0.417	µg/g
Aroclor 1260	ND	0.417	µg/g
Total PCB Results > PQL	1.1		

Date Analysis Completed

15-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
MAY 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV642-04 (DUPLICATE)	<u>NEA ID:</u>	9701831 (DUP)
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/17/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/21/97 <u>TIME:</u> 11:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.416	µg/g
Aroclor 1221	ND	0.416	µg/g
Aroclor 1232	ND	0.416	µg/g
Aroclor 1242	ND	0.416	µg/g
Aroclor 1248	ND	0.416	µg/g
Aroclor 1254	1.05	0.416	µg/g
Aroclor 1260	ND	0.416	µg/g
Total PCB Results > PQL	1.05		
Date Analysis Completed	15-MAY-97		

Authorized Signature: _____

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CERTIFICATE OF ANALYSIS
May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-05	NEA ID:	9701832		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 216	µg/g
Aroclor 1221	ND	0 216	µg/g
Aroclor 1232	ND	0 216	µg/g
Aroclor 1242	ND	0 216	µg/g
Aroclor 1248	ND	0 216	µg/g
Aroclor 1254	0 624	0 216	µg/g
Aroclor 1260	0 262	0 216	µg/g
Total PCB Results > REPORTING LIMIT	0 886		

Date Analysis Completed

16-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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CERTIFICATE OF ANALYSIS
May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-06	NEA ID:	9701833		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 210	µg/g
Aroclor 1221	ND	0 210	µg/g
Aroclor 1232	ND	0 210	µg/g
Aroclor 1242	ND	0 210	µg/g
Aroclor 1248	ND	0 210	µg/g
Aroclor 1254	0 645	0 210	µg/g
Aroclor 1260	ND	0 210	µg/g
Total PCB Results > REPORTING LIMIT	0 645		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS
May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-07	NEA ID:	9701834		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	ND	0 109	µg/g
Aroclor 1254	0 705	0 109	µg/g
Aroclor 1260	ND	0 109	µg/g
Total PCB Results > REPORTING LIMIT	0 705		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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CERTIFICATE OF ANALYSIS
May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-08	NEA ID:	9701835		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	0 126	0 110	µg/g
Aroclor 1260	ND	0 110	µg/g
Total PCB Results > REPORTING LIMIT	0 126		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS
May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-09	NEA ID:	9701836		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	0 227	0 111	µg/g
Aroclor 1260	ND	0 111	µg/g
Total PCB Results > REPORTING LIMIT	0 227		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-10	NEA ID:	9701837		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 106	µg/g
Aroclor 1221	ND	0 106	µg/g
Aroclor 1232	ND	0 106	µg/g
Aroclor 1242	ND	0 106	µg/g
Aroclor 1248	ND	0 106	µg/g
Aroclor 1254	0 160	0 106	µg/g
Aroclor 1260	ND	0 106	µg/g
Total PCB Results > REPORTING LIMIT	0 16		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-11	NEA ID:	9701840		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

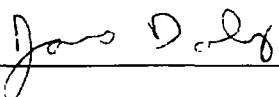
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	0 189	0 111	µg/g
Aroclor 1260	ND	0 111	µg/g
Total PCB Results > REPORTING LIMIT	0 189		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-12	NEA ID:	9701841		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	ND	0 108	µg/g
Aroclor 1254	0 524	0 108	µg/g
Aroclor 1260	0 138	0 108	µg/g
Total PCB Results > REPORTING LIMIT	0 662		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
MAY 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SV642-12 (DUP)	<u>NEA ID:</u>	9701841
<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/17/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/21/97 <u>TIME:</u> 11:00	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.111	µg/g
Aroclor 1221	ND	0.111	µg/g
Aroclor 1232	ND	0.111	µg/g
Aroclor 1242	ND	0.111	µg/g
Aroclor 1248	ND	0.111	µg/g
Aroclor 1254	0.512	0.111	µg/g
Aroclor 1260	0.151	0.111	µg/g
Total PCB Results > PQL	0.663		
Date Analysis Completed	17-MAY-97		

Authorized Signature: _____

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-13	NEA ID:	9701842		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	0 407	0 111	µg/g
Aroclor 1260	0 125	0 111	µg/g
Total PCB Results > REPORTING LIMIT	0 532		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-14	NEA ID:	9701843		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 111	µg/g
Aroclor 1221	ND	0 111	µg/g
Aroclor 1232	ND	0 111	µg/g
Aroclor 1242	ND	0 111	µg/g
Aroclor 1248	ND	0 111	µg/g
Aroclor 1254	0 400	0 111	µg/g
Aroclor 1260	0 158	0 111	µg/g
Total PCB Results > REPORTING LIMIT	0 558		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-15	NEA ID:	9701844		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 106	µg/g
Aroclor 1221	ND	0 106	µg/g
Aroclor 1232	ND	0 106	µg/g
Aroclor 1242	ND	0 106	µg/g
Aroclor 1248	ND	0 106	µg/g
Aroclor 1254	0 250	0 106	µg/g
Aroclor 1260	ND	0 106	µg/g
Total PCB Results > REPORTING LIMIT	0 25		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-16	NEA ID:	9701845		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	0 230	0 110	µg/g
Aroclor 1260	0 127	0 110	µg/g
Total PCB Results > REPORTING LIMIT	0 357		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-17	NEA ID:	9701846		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/17/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	ND	0 109	µg/g
Aroclor 1254	ND	0 109	µg/g
Aroclor 1260	ND	0 109	µg/g
Total PCB Results > REPORTING LIMIT	0		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-18	NEA ID:	9701847		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

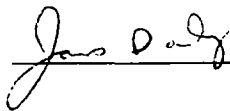
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 213	µg/g
Aroclor 1221	ND	0 213	µg/g
Aroclor 1232	ND	0 213	µg/g
Aroclor 1242	ND	0 213	µg/g
Aroclor 1248	ND	0 213	µg/g
Aroclor 1254	0 889	0 213	µg/g
Aroclor 1260	ND	0 213	µg/g
Total PCB Results > REPORTING LIMIT	0 889		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-19	NEA ID:	9701848		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 110	µg/g
Aroclor 1221	ND	0 110	µg/g
Aroclor 1232	ND	0 110	µg/g
Aroclor 1242	ND	0 110	µg/g
Aroclor 1248	ND	0 110	µg/g
Aroclor 1254	ND	0 110	µg/g
Aroclor 1260	ND	0 110	µg/g
Total PCB Results > REPORTING LIMIT	0		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
May 22, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CLIENT: JIM ORR

CUSTOMER ID:	SV642-20	NEA ID:	9701849		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT NO:	4517
SAMPLER ID:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 107	µg/g
Aroclor 1221	ND	0 107	µg/g
Aroclor 1232	ND	0 107	µg/g
Aroclor 1242	ND	0 107	µg/g
Aroclor 1248	ND	0 107	µg/g
Aroclor 1254	0 356	0 107	µg/g
Aroclor 1260	ND	0 107	µg/g
Total PCB Results > REPORTING LIMIT	0 356		

Date Analysis Completed

17-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SV642-21 NEA ID: 9701850
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/18/97 TIME: N/A
DATE RECEIVED: 04/21/97 TIME: 11 00 PROJECT: 4517
SAMPLED BY: J ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 221	µg/g
Aroclor 1221	ND	0 221	µg/g
Aroclor 1232	ND	0 221	µg/g
Aroclor 1242	ND	0 221	µg/g
Aroclor 1248	ND	0 221	µg/g
Aroclor 1254	0 581	0 221	µg/g
Aroclor 1260	0 229	0 221	µg/g
Total PCB Results > PQL	0 81		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV642-22	NEA ID:	9701851		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J. ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.211	µg/g
Aroclor 1221	ND	0.211	µg/g
Aroclor 1232	ND	0.211	µg/g
Aroclor 1242	ND	0.211	µg/g
Aroclor 1248	ND	0.211	µg/g
Aroclor 1254	0.544	0.211	µg/g
Aroclor 1260	ND	0.211	µg/g
Total PCB Results > PQL	0.544		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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May 27, 1997

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV642-23	NEA ID:	9701852		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J. ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.332	µg/g
Aroclor 1221	ND	0.332	µg/g
Aroclor 1232	ND	0.332	µg/g
Aroclor 1242	ND	0.332	µg/g
Aroclor 1248	ND	0.332	µg/g
Aroclor 1254	0.902	0.332	µg/g
Aroclor 1260	ND	0.332	µg/g
Total PCB Results > PQL	0.902		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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May 27, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	SV642-24	NEA ID:	9701853		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	04/18/97	TIME:	N/A
DATE RECEIVED:	04/21/97	TIME:	11 00	PROJECT:	4517
SAMPLED BY:	J ORR	LOCATION:	SCHLUMBERGER		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 222	µg/g
Aroclor 1221	ND	0 222	µg/g
Aroclor 1232	ND	0 222	µg/g
Aroclor 1242	ND	0 222	µg/g
Aroclor 1248	ND	0 222	µg/g
Aroclor 1254	0 546	0 222	µg/g
Aroclor 1260	ND	0 222	µg/g
Total PCB Results > PQL	0 546		

Date Analysis Completed

18-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

ATTACHMENT II

***Sediment Analytical Data
Lake Hartwell
May 1997***

NORTHEAST ANALYTICAL

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CERTIFICATE OF ANALYSIS
JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-000	<u>NEA ID:</u>	9702067
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.130	µg/g
Aroclor 1221	ND	0.130	µg/g
Aroclor 1232	ND	0.130	µg/g
Aroclor 1242	ND	0.130	µg/g
Aroclor 1248	ND	0.130	µg/g
Aroclor 1254	ND	0.130	µg/g
Aroclor 1260	ND	0.130	µg/g
Total PCB Results > PQL	0		
Date Analysis Completed	19-MAY-97		

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature: _____

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Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-001	<u>NEA ID:</u>	9702068
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.220	µg/g
Aroclor 1221	ND	0.220	µg/g
Aroclor 1232	ND	0.220	µg/g
Aroclor 1242	ND	0.220	µg/g
Aroclor 1248	0 920 *	0.220	µg/g
Aroclor 1254	0 637	0.220	µg/g
Aroclor 1260	ND	0.220	µg/g
Total PCB Results > PQL	1.56		
Date Analysis Completed	19-MAY-97		

Note * Aroclor 1248 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

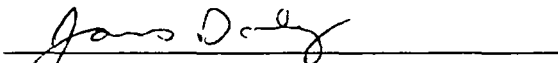
<u>CUSTOMER ID:</u>	SD-002	<u>NEA ID:</u>	9702069
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.158	µg/g
Aroclor 1221	ND	0.158	µg/g
Aroclor 1232	ND	0.158	µg/g
Aroclor 1242	ND	0.158	µg/g
Aroclor 1248	1.23 *	0.158	µg/g
Aroclor 1254	0.616	0.158	µg/g
Aroclor 1260	ND	0.158	µg/g
Total PCB Results > PQL	1.85		
Date Analysis Completed	19-MAY-97		

Note * Aroclor 1248 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-003	<u>NEA ID:</u>	9702066
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>SAMPLED BY:</u>	J. ORR	<u>PROJECT:</u>	4517
<u>CUSTOMER PO #:</u>	N/A	<u>LOCATION:</u>	SCHLUMBERGER
		<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.170	µg/g
Aroclor 1221	ND	0.170	µg/g
Aroclor 1232	ND	0.170	µg/g
Aroclor 1242	ND	0.170	µg/g
Aroclor 1248	ND	0.170	µg/g
Aroclor 1254	ND	0.170	µg/g
Aroclor 1260	ND	0.170	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed 19-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature. _____

Northeast Analytical, Inc.
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-004	<u>NEA ID:</u>	9702070
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.150	µg/g
Aroclor 1221	ND	0.150	µg/g
Aroclor 1232	ND	0.150	µg/g
Aroclor 1242	ND	0.150	µg/g
Aroclor 1248	0.204	0.150	µg/g
Aroclor 1254	0.188	0.150	µg/g
Aroclor 1260	ND	0.150	µg/g
Total PCB Results > PQL	0.392		

Date Analysis Completed 19-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

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Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-005	<u>NEA ID:</u>	9702071
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.153	µg/g
Aroclor 1221	ND	0.153	µg/g
Aroclor 1232	ND	0.153	µg/g
Aroclor 1242	ND	0.153	µg/g
Aroclor 1248	0 184 *	0.153	µg/g
Aroclor 1254	0 167	0.153	µg/g
Aroclor 1260	ND	0.153	µg/g
Total PCB Results > PQL	0 351		
Date Analysis Completed	19-MAY-97		

Note * Aroclor 1248 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature: _____

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Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTerview DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-005 DUP	<u>NEA ID:</u>	9702072
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.302	µg/g
Aroclor 1221	ND	0.302	µg/g
Aroclor 1232	ND	0.302	µg/g
Aroclor 1242	ND	0.302	µg/g
Aroclor 1248	2.11 *	0.302	µg/g
Aroclor 1254	2.25	0.302	µg/g
Aroclor 1260	ND	0.302	µg/g
Total PCB Results > PQL	4.36		
Date Analysis Completed	19-MAY-97		

Note * Aroclor 1248 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature. _____

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SD-006 NEA ID: 9702074
SAMPLE MATRIX: SEDIMENT DATE SAMPLED: 04/23/97 TIME: N/A
DATE RECEIVED: 04/26/97 TIME: 10:30 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.149	µg/g
Aroclor 1221	ND	0.149	µg/g
Aroclor 1232	ND	0.149	µg/g
Aroclor 1242	ND	0.149	µg/g
Aroclor 1248	0.235	0.149	µg/g
Aroclor 1254	ND	0.149	µg/g
Aroclor 1260	ND	0.149	µg/g
Total PCB Results > PQL	0.235		
Date Analysis Completed	19-MAY-97		

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature. _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-007	<u>NEA ID:</u>	9702075
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.159	µg/g
Aroclor 1221	ND	0.159	µg/g
Aroclor 1232	ND	0.159	µg/g
Aroclor 1242	ND	0.159	µg/g
Aroclor 1248	0.857	0.159	µg/g
Aroclor 1254	0.601	0.159	µg/g
Aroclor 1260	ND	0.159	µg/g
Total PCB Results > PQL	1.46		
Date Analysis Completed	19-MAY-97		

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

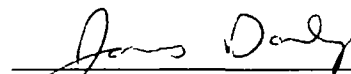
<u>CUSTOMER ID:</u>	SD-008	<u>NEA ID:</u>	9702076		
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97	<u>TIME:</u>	N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30	<u>PROJECT:</u>	4517
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER		
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.188	µg/g
Aroclor 1221	ND	0.188	µg/g
Aroclor 1232	ND	0.188	µg/g
Aroclor 1242	ND	0.188	µg/g
Aroclor 1248	1.18	0.188	µg/g
Aroclor 1254	0.953	0.188	µg/g
Aroclor 1260	ND	0.188	µg/g
Total PCB Results > PQL	2.13		
Date Analysis Completed	21-MAY-97		

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-009	<u>NEA ID:</u>	9702077
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.277	µg/g
Aroclor 1221	ND	0.277	µg/g
Aroclor 1232	2 90 *	0.277	µg/g
Aroclor 1242	ND	0.277	µg/g
Aroclor 1248	ND	0.277	µg/g
Aroclor 1254	1.81	0.277	µg/g
Aroclor 1260	ND	0.277	µg/g
Total PCB Results > PQL	4 71		

Date Analysis Completed 21-MAY-97

Note * Aroclor 1232 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1232 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-010	<u>NEA ID:</u>	9702078
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.197	µg/g
Aroclor 1221	ND	0.197	µg/g
Aroclor 1232	2.52 *	0.197	µg/g
Aroclor 1242	ND	0.197	µg/g
Aroclor 1248	ND	0.197	µg/g
Aroclor 1254	1.26	0.197	µg/g
Aroclor 1260	ND	0.197	µg/g
Total PCB Results > PQL	3.78		
Date Analysis Completed	21-MAY-97		

Note * Aroclor 1232 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1232 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SD-011 NEA ID: 9702079
SAMPLE MATRIX: SEDIMENT DATE SAMPLED: 04/23/97 TIME: N/A
DATE RECEIVED: 04/26/97 TIME: 10:30 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.269	µg/g
Aroclor 1221	ND	0.269	µg/g
Aroclor 1232	5.09 *	0.269	µg/g
Aroclor 1242	ND	0.269	µg/g
Aroclor 1248	ND	0.269	µg/g
Aroclor 1254	1.42	0.269	µg/g
Aroclor 1260	ND	0.269	µg/g
Total PCB Results > PQL	6.51		

Date Analysis Completed 21-MAY-97

Note * Aroclor 1232 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1232 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Robert E. Wagner, Laboratory Director

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-012	<u>NEA ID:</u>	9702073
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>SAMPLED BY:</u>	J. ORR	<u>PROJECT:</u>	4517
<u>CUSTOMER PO #:</u>	N/A	<u>LOCATION:</u>	SCHLUMBERGER
		<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.273	µg/g
Aroclor 1221	ND	0.273	µg/g
Aroclor 1232	2.93 *	0.273	µg/g
Aroclor 1242	ND	0.273	µg/g
Aroclor 1248	ND	0.273	µg/g
Aroclor 1254	1.19	0.273	µg/g
Aroclor 1260	ND	0.273	µg/g
Total PCB Results > PQL	4.12		
Date Analysis Completed	19-MAY-97		

Note * Aroclor 1232 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1232 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

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Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-013	<u>NEA ID:</u>	9702080
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/23/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.512	µg/g
Aroclor 1221	ND	0.512	µg/g
Aroclor 1232	9 21 *	0.512	µg/g
Aroclor 1242	ND	0.512	µg/g
Aroclor 1248	ND	0.512	µg/g
Aroclor 1254	1 78	0.512	µg/g
Aroclor 1260	ND	0.512	µg/g
Total PCB Results > PQL	11.0		
Date Analysis Completed	10-JUN-97		

Note * Aroclor 1232 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1232 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SD-013 Dup. *MR 6-27-97* NEA ID: 9702081
SAMPLE MATRIX: SEDIMENT DATE SAMPLED: 04/24/97 ³ TIME: N/A
DATE RECEIVED: 04/26/97 TIME: 10:30 PROJECT: 4517 *MR 6-27-97*
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.301	µg/g
Aroclor 1221	ND	0.301	µg/g
Aroclor 1232	4.85 *	0.301	µg/g
Aroclor 1242	ND	0.301	µg/g
Aroclor 1248	ND	0.301	µg/g
Aroclor 1254	1.34	0.301	µg/g
Aroclor 1260	ND	0.301	µg/g
Total PCB Results > PQL	6.19		

Date Analysis Completed 21-MAY-97

Note * Aroclor 1232 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1232 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-014	<u>NEA ID:</u>	9702082
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/24/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>SAMPLED BY:</u>	J. ORR	<u>PROJECT:</u>	4517
<u>CUSTOMER PO #:</u>	N/A	<u>LOCATION:</u>	SCHLUMBERGER
		<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.319	µg/g
Aroclor 1221	ND	0.319	µg/g
Aroclor 1232	ND	0.319	µg/g
Aroclor 1242	ND	0.319	µg/g
Aroclor 1248	0.848 *	0.319	µg/g
Aroclor 1254	0.540	0.319	µg/g
Aroclor 1260	ND	0.319	µg/g
Total PCB Results > PQL	1.39		
Date Analysis Completed	21-MAY-97		

Note * Aroclor 1248 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: SD-015 NEA ID: 9702083
SAMPLE MATRIX: SEDIMENT DATE SAMPLED: 04/24/97 TIME: N/A
DATE RECEIVED: 04/26/97 TIME: 10:30 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.327	µg/g
Aroclor 1221	ND	0.327	µg/g
Aroclor 1232	ND	0.327	µg/g
Aroclor 1242	ND	0.327	µg/g
Aroclor 1248	1.40 *	0.327	µg/g
Aroclor 1254	0.686	0.327	µg/g
Aroclor 1260	ND	0.327	µg/g
Total PCB Results > PQL	2.09		

Date Analysis Completed 21-MAY-97

Note * Aroclor 1248 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature. _____

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Robert E. Wagner, Laboratory Director

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-106	<u>NEA ID:</u>	9702084
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/24/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.417	µg/g
Aroclor 1221	ND	0.417	µg/g
Aroclor 1232	ND	0.417	µg/g
Aroclor 1242	ND	0.417	µg/g
Aroclor 1248	2.70 *	0.417	µg/g
Aroclor 1254	1.40	0.417	µg/g
Aroclor 1260	ND	0.417	µg/g
Total PCB Results > PQL	4.10		
Date Analysis Completed	22-MAY-97		

Note * Aroclor 1248 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

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Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-532	<u>NEA ID:</u>	9702085
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/24/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.228	µg/g
Aroclor 1221	ND	0.228	µg/g
Aroclor 1232	ND	0.228	µg/g
Aroclor 1242	ND	0.228	µg/g
Aroclor 1248	0 385	0.228	µg/g
Aroclor 1254	ND	0.228	µg/g
Aroclor 1260	ND	0.228	µg/g
Total PCB Results > PQL	0 385		

Date Analysis Completed 22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

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Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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JUNE 11, 1997

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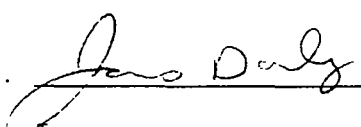
215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-535	<u>NEA ID:</u>	9702086
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/24/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.380	µg/g
Aroclor 1221	ND	0.380	µg/g
Aroclor 1232	ND	0.380	µg/g
Aroclor 1242	ND	0.380	µg/g
Aroclor 1248	0.512	0.380	µg/g
Aroclor 1254	ND	0.380	µg/g
Aroclor 1260	ND	0.380	µg/g
Total PCB Results > PQL	0.512		
Date Analysis Completed	22-MAY-97		

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature. 

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

S \CERT97\061197H ERM

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-641	<u>NEA ID:</u>	9702087
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/25/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>PROJECT:</u>	4517		
<u>SAMPLED BY:</u>	J. ORR	<u>LOCATION:</u>	SCHLUMBERGER
<u>CUSTOMER PO #:</u>	N/A	<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.383	µg/g
Aroclor 1221	ND	0.383	µg/g
Aroclor 1232	ND	0.383	µg/g
Aroclor 1242	ND	0.383	µg/g
Aroclor 1248	ND	0.383	µg/g
Aroclor 1254	ND	0.383	µg/g
Aroclor 1260	ND	0.383	µg/g
Total PCB Results > PQL	0		

Date Analysis Completed 22-MAY-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

S \CERT97\061197H ERM

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>CUSTOMER ID:</u>	SD-642	<u>NEA ID:</u>	9702088
<u>SAMPLE MATRIX:</u>	SEDIMENT	<u>DATE SAMPLED:</u>	04/24/97 <u>TIME:</u> N/A
<u>DATE RECEIVED:</u>	04/26/97	<u>TIME:</u>	10:30
<u>SAMPLED BY:</u>	J. ORR	<u>PROJECT:</u>	4517
<u>CUSTOMER PO #:</u>	N/A	<u>LOCATION:</u>	SCHLUMBERGER
		<u>LAB ELAP #:</u>	11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.388	µg/g
Aroclor 1221	ND	0.388	µg/g
Aroclor 1232	ND	0.388	µg/g
Aroclor 1242	ND	0.388	µg/g
Aroclor 1248	ND	0.388	µg/g
Aroclor 1254	ND	0.388	µg/g
Aroclor 1260	ND	0.388	µg/g
Total PCB Results > PQL	0		
Date Analysis Completed	22-MAY-97		

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

S \CERT97\061197H ERM

(6) 3-3350

PROJ NO	PROJECT NAME	NO OF CONTAINERS	REMARKS
4517	Schlumberger	2	8080 9702066
		1	9702067
		1	9702068
		1	9702069
		1	9702070
		1	9702071
		1	9702072
		1	9702073
		1	9702074
		1	9702075
		1	9702076
		1	9702077
		1	9702078
		1	9702079
		1	9702080

PROJ NO	PROJECT NAME	NO OF CONTAINERS	REMARKS
4517	Schlumberger	2	8080 9702066
		1	9702067
		1	9702068
		1	9702069
		1	9702070
		1	9702071
		1	9702072
		1	9702073
		1	9702074
		1	9702075
		1	9702076
		1	9702077
		1	9702078
		1	9702079
		1	9702080

PROJ NO	PROJECT NAME	NO OF CONTAINERS	REMARKS
4517	Schlumberger	2	8080 9702066
		1	9702067
		1	9702068
		1	9702069
		1	9702070
		1	9702071
		1	9702072
		1	9702073
		1	9702074
		1	9702075
		1	9702076
		1	9702077
		1	9702078
		1	9702079
		1	9702080

CHAIN OF CUSTODY RECORD

After the laboratory has analyzed the samples and signed the Chain of Custody Record, retain the copy for the Lab files. Send a white copy and express ticket to ERM Southeast at the address above.

PROJ NO	PROJECT NAME	NO OF CONTAINERS		STATION LOCATION		REMARKS	
DATE	TIME	COMP	GRAB	NO	OF	CONTAINERS	REMARKS
4/5/97				2	1	1	Med Red 8080 9702081
				2	1	1	9702082
				2	1	1	9702083
				2	1	1	9702084
				2	1	1	9702085
				2	1	1	9702086
4/10/97				2	1	1	9702087
4/24				2	1	1	9702088
				1	1	1	9702089
				1	1	1	9702090
				1	1	1	9702091
				1	1	1	9702092
				1	1	1	9702093
				1	1	1	9702094
				1	1	1	9702095
Relinquished by (Signature)		Received by (Signature)		Date / Time		Received by (Signature)	
4/25/97 1200		4/26/97 10:30 AM					
Relinquished by (Signature)		Received by (Signature)		Date / Time		Received by (Signature)	
Relinquished by (Signature)		Received for Laboratory by (Signature)		Date / Time		Remarks	
						COOLER TEMP 9.0°C	

REMARKS

[illegible]

sed TOC Data

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES

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* I N V O I C E *

Document Number: 007173

Document Date: 05/13/97

Page: 1

Sold ERM-SOUTHEAST, INC.
To 215 CENTERVIEW DRIVE
SUITE 110, P.O. BOX 881
BRENTWOOD, TN
37027

Ship ERM-SOUTHEAST, INC
To: 215 CENTERVIEW DRIVE
SUITE 110, P.O. BOX 881
BRENTWOOD, TN
37027

Ship Via.: US MAIL
Ship Date: 05/13/97
Due Date.: 05/23/97
Terms.... NET 10

Cust I.D..... ERMSEB
P.O. Number...: PROJECT #4517
P.O. Date.....: 05/13/97
Job/Order No.:
Salesperson...: R. STOLL

Item I.D /Desc.	Ordered	Shipped	Unit	Price	Net	TX
-----	23.00	23.00	EA	55.0000	1265 00	E
TOC ANALYSIS ON 23 SEDIEMNT SAMPLES FROM						
COC DATE: 4/26/97 SCHLUMBERGER #4517						
FOR JIM ORE						

Subtotal: 1265 00
Tax..... 0.00
Total.... 1265.00

A 1 1/2 percent per month service charge will be added to all past due accounts.

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS

MAY 13, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

SAMPLE MATRIX: SEDIMENT

DATE SAMPLED: 4/23/97-4/25/97

DATE RECEIVED: 4/26/97

TIME: 10:30

DATE TESTED: SEE BELOW

SAMPLED BY: J. ORR

LOCATION: SCHLUMBERGER

PROJECT #: 4517

LAB ELAP #: 11078

TOTAL ORGANIC CARBON BY LLOYD KAHN METHOD

NEA ID	CUSTOMER ID	RESULT	STANDARD DEVIATION	DETECTION LIMIT	UNITS	DATE
9702066	SD-003	12000	2700	4500	mg/kg	5/7/97
9702067	SD-000	< 4200	370	4200	mg/kg	5/7/97
9702068	SD-001	< 6300	3.0	6300	mg/kg	5/7/97
9702069	SD-002	< 7800	1900	7800	mg/kg	5/7/97
9702070	SD-004	< 6400	410	6400	mg/kg	5/7/97
9702071	SD-005	< 7900	1100	7900	mg/kg	5/7/97
9702072	SD-005 DUP	16000	21	14000	mg/kg	5/7/97
9702073	SD-012	38000	1400	13000	mg/kg	5/7/97
9702074	SD-006	15000	5800	6800	mg/kg	5/7/97
9702075	SD-007	20000	11000	8200	mg/kg	5/7/97
9702076	SD-008	31000	5200	8800	mg/kg	5/7/97
9702077	SD-009	49000	1600	12000	mg/kg	5/7/97
9702078	SD-010	27000	460	8200	mg/kg	5/7/97
9702079	SD-011	36000	3500	11000	mg/kg	5/7/97
9702080	SD-013	30000	9400	12000	mg/kg	5/7/97

Authorized Signature: Robert E. Wagner

Northeast Analytical, Inc.

Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS

MAY 13, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

SAMPLE MATRIX: SEDIMENT DATE SAMPLED: 4/23/97-4/25/97
DATE RECEIVED: 4/26/97 TIME: 10:30 DATE TESTED: SEE BELOW
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
PROJECT #: 4517 LAB ELAP #: 11078

TOTAL ORGANIC CARBON BY LLOYD KAHN METHOD

NEA ID	CUSTOMER ID	RESULT	STANDARD DEVIATION	DETECTION LIMIT	UNITS	DATE
9702081	SD-013 DUP	29000	1800	11000	mg/kg	5/8/97
9702082	SD-014	39000	6200	13000	mg/kg	5/8/97
9702083	SD-015	26000	2800	14000	mg/kg	5/8/97
9702084	SD-106	64000	9000	24000	mg/kg	5/8/97
9702085	SD-532	22000	4700	8400	mg/kg	5/8/97
9702086	SD-535	38000	510	15000	mg/kg	5/8/97
9702087	SD-641	40000	350	17000	mg/kg	5/8/97
9702088	SD-642	34000	2100	15000	mg/kg	5/8/97

Authorized Signature: *Robert E. Wagner*
Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

S \CERT97\051397B ERM

CHAIN OF CUSTODY RECORD

PROJ NO		PROJECT NAME		NO OF CONTAINERS		REMARKS	
4517		Schlun		2		8080 9702066	
SAMPLERS (Signature)		Same R On		1		9702067	
SIA NO	DATE	TIME	COMP	GRAB	STATION LOCATION		
	4/24/17		✓		SD-003	1	9702068
			✓		SD-000	1	9702069
			✓		SD-001	1	9702070
			✓		SD-002	1	9702071
			✓		SD-004	1	9702072
			✓		SD-005	1	9702073
			✓		SD-005 Dup	1	9702074
			✓		SD-006	1	9702075
			✓		SD-007	1	9702076
			✓		SD-008	1	9702077
			✓		SD-009	1	9702078
			✓		SD-010	1	9702079
			✓		SD-011	1	9702080
			✓		SD-013	1	
Relinquished by (Signature)		Date / Time		Received by (Signature)		Date / Time	
Same R On		4/25/17 1200		4/26/17			
Relinquished by (Signature)		Date / Time		Received by (Signature)		Date / Time	
Relinquished by (Signature)		Date / Time		Received for Laboratory by (Signature)		Remarks	
						COOLER TEMP 9.0°C	

CHAIN OF CUSTODY RECORD

PROJ NO	PROJECT NAME						
4517	Schlum						
SAMPLERS (Signature)							
<i>[Signature]</i>							
STA NO	DATE	TIME	COMP	GRAB	STATION LOCATION	NO OF CONTAINERS	REMARKS
	4/14/97		V		SD-013 Dup	2	M-Rod 8087 9702081
			V		SD-014	2	9702082
			V		SD-015	2	9702083
			V		SD-106	2	9702084
			V		SD-532	2	9702085
			V		SD-535	2	9702086
	4/25		V		SD-641	2	9702087
	4/24		V		SD-642	2	9702088
			V		SV-107-07	1	9702089
			V		SV-107-11	1	9702090
			V		SV-532-12	1	9702091
			V		SV-106-10	1	9702092
			V		SV-106-20	1	9702093
			V		SV-532-23	1	9702094
			V		SV-532-24	1	9702095
Relinquished by (Signature)		Date / Time	Received by (Signature)	Date / Time	Relinquished by (Signature)	Date / Time	Received by (Signature)
<i>[Signature]</i>		4/25/97 1200	<i>[Signature]</i>	4/26/97 10:50 AM			
Relinquished by (Signature)		Date / Time	Received by (Signature)	Date / Time	Relinquished by (Signature)	Date / Time	Received by (Signature)
Relinquished by (Signature)		Date / Time	Received for Laboratory by (Signature)	Date / Time	Remarks		
					COLLER TEMP 9.0°C		

White copy return to EIM yellow copy to sampler pink copy to lab

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970502LCS1	=	10 6 $\mu\text{g/g}$
AMOUNT SPIKED	=	9 78 $\mu\text{g/g}$
PERCENT RECOVERY	=	108
970505LCS1	=	9.85 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.86 $\mu\text{g/g}$
PERCENT RECOVERY	=	99 9
970506LCS1	=	9.97 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.87 $\mu\text{g/g}$
PERCENT RECOVERY	=	101

LABORATORY METHOD BLANK

970502BS1E	=	< 0.109 $\mu\text{g/g}$
970505BS1E	=	< 0.109 $\mu\text{g/g}$
970506BS1E	=	< 0.108 $\mu\text{g/g}$

LABORATORY DUPLICATE % DIFFERENCE

9702071	=	0.351 $\mu\text{g/g}$
9702072	=	4 36 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	170
9702080	=	11.0 $\mu\text{g/g}$
9702081	=	6 19 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	56 0

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

S \CERT97\0611971 ERM
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NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
JUNE 11, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9702068MS	=	21.5 $\mu\text{g/g}$
AMOUNT SPIKED	=	20.3 $\mu\text{g/g}$
PERCENT RECOVERY	=	101
9702086MS	=	33.9 $\mu\text{g/g}$
AMOUNT SPIKED	=	33.9 $\mu\text{g/g}$
PERCENT RECOVERY	=	98.5

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9702068MSD	=	22.4 $\mu\text{g/g}$
AMOUNT SPIKED	=	21.4 $\mu\text{g/g}$
PERCENT RECOVERY	=	100
9702086MSD	=	34.6 $\mu\text{g/g}$
AMOUNT SPIKED	=	34.9 $\mu\text{g/g}$
PERCENT RECOVERY	=	97.7

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9702068MS	=	101
9702068MSD	=	100
PERCENT DIFFERENCE	=	0.995
9702088MS	=	98.5
9702086MSD	=	97.7
PERCENT DIFFERENCE	=	0.815

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

S \CERT97\0611971 ERM
REW\JP

ATTACHMENT III

Corbicula Analytical Data
Lake Hartwell
May, 1997

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	C-0	NEA ID:	9703400		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	05/21/97	TIME:	N/A
DATE RECEIVED:	05/28/97	TIME:	13 00	PROJECT:	SCHLUMBERGER
SAMPLED BY:	N/A	LOCATION:	LAKE HORTWELL, S C		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 108	µg/g
Aroclor 1221	ND	0 108	µg/g
Aroclor 1232	ND	0 108	µg/g
Aroclor 1242	ND	0 108	µg/g
Aroclor 1248	0 192	0 108	µg/g
Aroclor 1254	0 233	0 108	µg/g
Aroclor 1260	ND	0 108	µg/g
Total PCB Results > PQL	0 425		

Date Analysis Completed

5-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: C-1 NEA ID: 9703404
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 05/21/97 TIME: N/A
DATE RECEIVED: 05/28/97 TIME: 13 00 PROJECT: SCHLUMBERGER
SAMPLED BY: N/A LOCATION: LAKE HORTWELL, S C
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

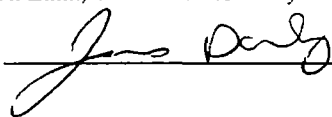
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.332	µg/g
Aroclor 1221	ND	0.332	µg/g
Aroclor 1232	ND	0.332	µg/g
Aroclor 1242	ND	0.332	µg/g
Aroclor 1248	5.84	0.332	µg/g
Aroclor 1254	1.75	0.332	µg/g
Aroclor 1260	ND	0.332	µg/g
Total PCB Results > PQL	7.59		

Date Analysis Completed

11-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	C-2	NEA ID:	9703402		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	05/21/97	TIME:	N/A
DATE RECEIVED:	05/28/97	TIME:	13 00	PROJECT:	SCHLUMBERGER
SAMPLED BY:	N/A	LOCATION:	LAKE HORTWELL, S C		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 109	µg/g
Aroclor 1221	ND	0 109	µg/g
Aroclor 1232	ND	0 109	µg/g
Aroclor 1242	ND	0 109	µg/g
Aroclor 1248	0 210	0 109	µg/g
Aroclor 1254	0 198	0 109	µg/g
Aroclor 1260	ND	0 109	µg/g
Total PCB Results > PQL	0 408		

Date Analysis Completed

5-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	C-3	NEA ID:	9703405		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	05/21/97	TIME:	N/A
DATE RECEIVED:	05/28/97	TIME:	13 00	PROJECT:	SCHLUMBERGER
SAMPLED BY:	N/A	LOCATION:	LAKE HORTWELL, S C		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.330	µg/g
Aroclor 1221	ND	0.330	µg/g
Aroclor 1232	ND	0.330	µg/g
Aroclor 1242	ND	0.330	µg/g
Aroclor 1248	4.86	0.330	µg/g
Aroclor 1254	2.64	0.330	µg/g
Aroclor 1260	ND	0.330	µg/g
Total PCB Results > PQL	7.5		

Date Analysis Completed

7-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample.

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

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301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: C-5 NEA ID: 9703403
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 05/21/97 TIME: N/A
DATE RECEIVED: 05/28/97 TIME: 13 00 PROJECT: SCHLUMBERGER
SAMPLED BY: N/A LOCATION: LAKE HORTWELL, S C
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 336	µg/g
Aroclor 1221	ND	0 336	µg/g
Aroclor 1232	ND	0 336	µg/g
Aroclor 1242	ND	0 336	µg/g
Aroclor 1248	5 22	0 336	µg/g
Aroclor 1254	2 83	0 336	µg/g
Aroclor 1260	ND	0 336	µg/g
Total PCB Results > PQL	8 05		

Date Analysis Completed

11-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID:	C-6	NEA ID:	9703406		
SAMPLE MATRIX:	BIOTA FISH	DATE SAMPLED:	05/21/97	TIME:	N/A
DATE RECEIVED:	05/28/97	TIME:	13 00	PROJECT:	SCHLUMBERGER
SAMPLED BY:	N/A	LOCATION:	LAKE HORTWELL, S C		
CUSTOMER PO #:	N/A	LAB ELAP #:	11078		

SW-846 Method 8080, Polychlorinated Biphenyls

<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0 208	µg/g
Aroclor 1221	ND	0 208	µg/g
Aroclor 1232	ND	0 208	µg/g
Aroclor 1242	ND	0 208	µg/g
Aroclor 1248	3 89	0 208	µg/g
Aroclor 1254	2 02	0 208	µg/g
Aroclor 1260	ND	0 208	µg/g
Total PCB Results > PQL	5 91		

Date Analysis Completed

10-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature

Northeast Analytical, Inc
Robert E Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS June 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

CUSTOMER ID: C-111 2-6 Def. MR 6-27-97 NEA ID: 9703401
SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 05/21/97 TIME: N/A
DATE RECEIVED: 05/28/97 TIME: 13 00 PROJECT: SCHLUMBERGER
SAMPLED BY: N/A LOCATION: LAKE HORTWELL, S C
CUSTOMER PO #: N/A LAB ELAP #: 11078

SW-846 Method 8080, Polychlorinated Biphenyls

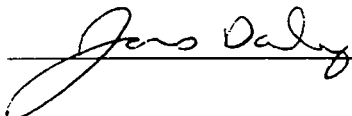
<u>PARAMETER</u>	<u>RESULTS</u>	<u>PQL</u>	<u>UNITS</u>
Aroclor 1016	ND	0.216	µg/g
Aroclor 1221	ND	0.216	µg/g
Aroclor 1232	ND	0.216	µg/g
Aroclor 1242	ND	0.216	µg/g
Aroclor 1248	3.96	0.216	µg/g
Aroclor 1254	2.08	0.216	µg/g
Aroclor 1260	ND	0.216	µg/g
Total PCB Results > PQL	6.04		

Date Analysis Completed

7-JUN-97

Note ND (not detected) denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) denotes lowest analyte concentration reportable for the sample

Authorized Signature



Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JUNE 12, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9703397MS	=	9.40 $\mu\text{g/g}$
AMOUNT SPIKED	=	10.2 $\mu\text{g/g}$
PERCENT RECOVERY	=	92.2

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9703397MSD	=	9.83 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.73 $\mu\text{g/g}$
PERCENT RECOVERY	=	101

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9703397MS	=	92.2
9703397MSD	=	101
PERCENT DIFFERENCE	=	9.11

LABORATORY CONTROL SPIKE % RECOVERY

970602LCF1	=	10.5 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.76 $\mu\text{g/g}$
PERCENT RECOVERY	=	108

LABORATORY METHOD BLANK

970602BF1E	=	< 0.109 $\mu\text{g/g}$
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Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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Note After the laboratory has received samples and signed the Chain of Custody Record, retain the yellow copy for the Lab files. Send time white copy and express ticket to ERM-Southeast at the address shown

CHAIN OF CUSTODY RECORD

ERM-SOUTHEAST, INC
215 Centerview Drive
Brentwood, TN 37027
(615) 373-3350

PROJECT NAME		Schlumberger		PROJECT LOCATION		Lake Fortwell, SC.	
PROJECT NO		4517		PROJECT CONTACT		Jim Orr	
CLIENT REPRESENTATIVE				PROJECT MANAGER		Jim Orr	
TELEPHONE NO		615-373-3350					
SAMPLE ID	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (Include Matrix and Point of Sample)		
	5/21/97			X	SV-106-24		
	5/21/97			X	SV-106-22		
	5/21/97			X	SV-106-23		
C-0	5/21/97		X		Town Creek O.S.		
C-111	5/21/97		X		Town Creek O.S.		
C-2	5/21/97		X		Town Creek O.S.		
C-5	5/21/97		X		Town Creek O.S.		
C-1	5/21/97		X		Twelve Mile O.S.		
C-3	5/21/97		X		Twelve Mile O.S.		
C-6	5/21/97		X		Twelve Mile O.S.		
Relinquished by (Signature)					Date / Time		Received by (Signature)
[Signature]					5/27/97 1600		[Signature]
Relinquished by (Signature)					Date / Time		Received by (Signature)
[Signature]							[Signature]
Relinquished by (Signature)					Date / Time		Received by (Signature)
[Signature]					5/28/97 1300		[Signature]
Remarks					Cooler Temp 4°C		
SAMPLERS (Signature)							

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

*
* I N V O I C E *
*

Document Number: 007346

Document Date: 06/12/97

Page: 1

Sold ERM-SOUTHEAST, INC.
To. 215 CENTERVIEW DRIVE
SUITE 110, P.O. BOX 881
BRENTWOOD, TN
37027

Ship ERM-SOUTHEAST, INC.
To: 215 CENTERVIEW DRIVE
SUITE 110, P.O. BOX 881
BRENTWOOD, TN
37027

Ship Via.: US MAIL
Ship Date: 06/12/97
Due Date.: 06/22/97
Terms..... NET 10

Cust I.D.....: ERMSEB
P.O. Number...: PROJECT 4517
P.O. Date.....: 06/12/97
Job/Order No.:
Salesperson...: R. STOLL

Item I.D./Desc	Ordered	Shipped	Unit	Price	Net	TX
PCBPAC F	10.00	10.00	EA	185.0000	1850.00	E
PCB ANALYSIS BY METHOD 8080 ON 10 FISH						
SAMPLES FROM COC DATE: 5/28/97						
SCHLUMBERGER PROJECT 4517						
GRINDING	10.00	10.00	EA	15.0000	150.00	E
GRINDING ON 10 BIOTS SAMPLES						

Subtotal: 2000.00
Tax.....: 0.00
Total....: 2000.00

A 1 1/2 percent per month service charge will be added to all past due accounts.

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

ATTACHMENT IV
Laboratory Quality Assurance
Data 1997

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

MAY 21, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970425LCF1	=	9.38 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.57 $\mu\text{g/g}$
PERCENT RECOVERY	=	98.0

LABORATORY METHOD BLANK

970425BF1E	=	< 0.108 $\mu\text{g/g}$
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Authorized Signature. _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

MAY 21, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970429LCF1	=	9.81 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.66 $\mu\text{g/g}$
PERCENT RECOVERY	=	102

LABORATORY DUPLICATE % DIFFERENCE

9701841	=	0.662 $\mu\text{g/g}$
9701841D	=	0.663 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	0.15

LABORATORY METHOD BLANK

970429BF1E	=	< 0.109 $\mu\text{g/g}$
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Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
MAY 23, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9701820MS	=	9.99 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.66 $\mu\text{g/g}$
PERCENT RECOVERY	=	97.7

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701820MSD	=	9.74 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.56 $\mu\text{g/g}$
PERCENT RECOVERY	=	96.1

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701820MS	=	97.7
9701820MSD	=	96.1
PERCENT DIFFERENCE	=	1.65

LABORATORY DUPLICATE % DIFFERENCE

9701821	=	1.01 $\mu\text{g/g}$
9701821D	=	1.09 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	7.62

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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MAY 23, 1997

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215 CENTERVIEW DRIVE, SUITE 110
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CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9701659MS	=	11.1 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.39 $\mu\text{g/g}$
PERCENT RECOVERY	=	105

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701659MSD	=	10.5 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.57 $\mu\text{g/g}$
PERCENT RECOVERY	=	96.7

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701659MS	=	105
9701659MSD	=	96.7
PERCENT DIFFERENCE	=	8.23

LABORATORY DUPLICATE % DIFFERENCE

9701822	=	0.742 $\mu\text{g/g}$
9701822D	=	0.420 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	55.4
9701831	=	1.10 $\mu\text{g/g}$
9701831D	=	1.05 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	4.65

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS

MAY 23, 1997

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215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970428LCF1	=	10.2 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.50 $\mu\text{g/g}$
PERCENT RECOVERY	=	107

LABORATORY METHOD BLANK

970428BF1E	=	< 0.106 $\mu\text{g/g}$
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Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
MAY 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/15/97
<u>DATE RECEIVED:</u>	04/17/97	<u>TIME:</u>	10:00
<u>SAMPLED BY:</u>	J. ORR	<u>PROJECT:</u>	4517
<u>CUSTOMER PO#:</u>	N/A	<u>LOCATION:</u>	SCHLUMBERGER
		<u>LAB ELAP #:</u>	11078

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9701652MS	=	12.1 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.87 $\mu\text{g/g}$
PERCENT RECOVERY	=	111

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701652MSD	=	11.8 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.90 $\mu\text{g/g}$
PERCENT RECOVERY	=	108

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701652MS	=	111
9701652MSD	=	108
PERCENT DIFFERENCE	=	2.74

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
MAY 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/15/97
<u>DATE RECEIVED:</u>	04/17/97	<u>TIME:</u>	10:00
<u>SAMPLED BY:</u>	J. ORR	<u>PROJECT:</u>	4517
<u>CUSTOMER PO#:</u>	N/A	<u>LOCATION:</u>	SCHLUMBERGER
		<u>LAB ELAP #:</u>	11078

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY DUPLICATE

9701654	=	3.4 $\mu\text{g/g}$
9701654D	=	5.02 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	29.2
9701664	=	4.13 $\mu\text{g/g}$
9701664D	=	4.92 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	17.5

LABORATORY CONTROL SPIKE

970423LCF1	=	9.33 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.50 $\mu\text{g/g}$
PERCENT RECOVERY	=	98.2

LABORATORY METHOD BLANK

970423BF1E	=	< 0.105 $\mu\text{g/g}$
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Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

MAY 30, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970501LCF1	=	9.67 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.42 $\mu\text{g/g}$
PERCENT RECOVERY	=	103

970506LCF1	=	9.15 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.37 $\mu\text{g/g}$
PERCENT RECOVERY	=	97.6

LABORATORY METHOD BLANK

970501BF1E	=	< 0.107 $\mu\text{g/g}$
970506BF1E	=	< 0.108 $\mu\text{g/g}$

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
JUNE 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9701805MS	=	14.3 $\mu\text{g/g}$
AMOUNT SPIKED	=	10.1 $\mu\text{g/g}$
PERCENT RECOVERY	=	142

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701805MSD	=	14.8 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.98 $\mu\text{g/g}$
PERCENT RECOVERY	=	148

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701805MS	=	142
9701805MSD	=	148
PERCENT DIFFERENCE	=	4.14

LABORATORY DUPLICATE % DIFFERENCE

9701858	=	.756 $\mu\text{g/g}$
9701858D	=	.803 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	6.04

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JUNE 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9701857MS	=	13.1 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.97 $\mu\text{g/g}$
PERCENT RECOVERY	=	131*

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701857MSD	=	17.8 $\mu\text{g/g}$
AMOUNT SPIKED	=	10.0 $\mu\text{g/g}$
PERCENT RECOVERY	=	178*

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701857MS	=	131
9701857MSD	=	178
PERCENT DIFFERENCE	=	30.4

LABORATORY DUPLICATE % DIFFERENCE

9701815	=	2.16 $\mu\text{g/g}$
9701815D	=	2.15 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	0.46

* Recoveries are elevated due to corresponding peaks in the sample.

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JUNE 2, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970527LCF1	=	10.1 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.60 $\mu\text{g/g}$
PERCENT RECOVERY	=	105

LABORATORY METHOD BLANK

970527BF1E	=	< 0.107 $\mu\text{g/g}$
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Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ERM SOUTHEAST, INC.
215 Centerview Drive, Suite 110
Brentwood, TN 37027
CONTACT: Jim Orr

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

May 7, 1997

LABORATORY MATRIX SPIKE % RECOVERY

9701674MS	=	11.4 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.84 $\mu\text{g/g}$
PERCENT RECOVERY	=	111

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701674MSD	=	11.3 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.70 $\mu\text{g/g}$
PERCENT RECOVERY	=	112

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701674MS	=	111
9701674MSD	=	112
PERCENT DIFFERENCE	=	0.897

LABORATORY DUPLICATE

9701676	=	1.60 $\mu\text{g/g}$
9701676D	=	1.48 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	7.79

Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

ERM SOUTHEAST, INC.
215 Centerview Drive, Suite 110
Brentwood, TN 37027
CONTACT: Jim Orr

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

May 7, 1997

LABORATORY CONTROL SPIKE % RECOVERY

970424LCF1	=	10.6 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.66 $\mu\text{g/g}$
PERCENT RECOVERY	=	110

LABORATORY METHOD BLANK

970424BF1E	=	< 0.109 $\mu\text{g/g}$
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Authorized Signature: _____

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
MAY 8, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

SAMPLE MATRIX: BIOTA FISH DATE SAMPLED: 04/15/97
DATE RECEIVED: 04/17/97 TIME: 10:00 PROJECT: 4517
SAMPLED BY: J. ORR LOCATION: SCHLUMBERGER
CUSTOMER PO#: N/A LAB ELAP #: 11078

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9701637MS	=	10.9 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.54 $\mu\text{g/g}$
PERCENT RECOVERY	=	104

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701637MSD	=	11.0 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.29 $\mu\text{g/g}$
PERCENT RECOVERY	=	108

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701652MS	=	104
9701652MSD	=	108
PERCENT DIFFERENCE	=	3.77

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Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
MAY 8, 1997

ALCOA - MASSENA OPERATIONS

GRASSE RIVER SAMPLING
PARK AVENUE EAST, P.O. BOX 150
MASSENA, NY 13662-0150
CONTACT: TOM LIGHTFOOT

<u>SAMPLE MATRIX:</u>	BIOTA FISH	<u>DATE SAMPLED:</u>	04/15/97
<u>DATE RECEIVED:</u>	04/17/97	<u>TIME:</u>	10:00
<u>SAMPLED BY:</u>	J. ORR	<u>PROJECT:</u>	4517
<u>CUSTOMER PO#:</u>	N/A	<u>LOCATION:</u>	SCHLUMBERGER
		<u>LAB ELAP #:</u>	11078

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY DUPLICATE

9701642	=	3.90 $\mu\text{g/g}$
9701642D	=	3.77 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	3.39

LABORATORY CONTROL SPIKE

970422LCF1	=	10.4 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.83 $\mu\text{g/g}$
PERCENT RECOVERY	=	106

LABORATORY METHOD BLANK

970422BF1E	=	< 0.110 $\mu\text{g/g}$
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Robert E. Wagner, Laboratory Director

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BRENTWOOD, TN 37027
CONTACT: JIM ORR

MAY 12, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

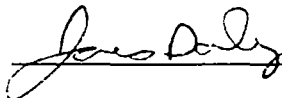
LABORATORY CONTROL SPIKE % RECOVERY

970422LCW1	=	0.561 $\mu\text{g/L}$
AMOUNT SPIKED	=	0.495 $\mu\text{g/L}$
PERCENT RECOVERY	=	113

LABORATORY METHOD BLANK

970422BW1E	=	< 0.0500 $\mu\text{g/L}$
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CERTIFICATE OF ANALYSIS
JUNE 9, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9702089MS	=	19.6 $\mu\text{g/g}$
AMOUNT SPIKED	=	10.1 $\mu\text{g/g}$
PERCENT RECOVERY	=	194 *

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9702089MSD	=	19.9 $\mu\text{g/g}$
AMOUNT SPIKED	=	10.2 $\mu\text{g/g}$
PERCENT RECOVERY	=	195 *

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701857MS	=	194
9701857MSD	=	195
PERCENT DIFFERENCE	=	0.51

LABORATORY CONTROL SPIKE % RECOVERY

970505LCF1	=	10.4 $\mu\text{g/g}$
AMOUNT SPIKED	=	10.0 $\mu\text{g/g}$
PERCENT RECOVERY	=	104

LABORATORY METHOD BLANK

970505BF1E	=	< 0.110 $\mu\text{g/g}$
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* Spike recoveries elevated due to sample matrix.

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215 CENTERVIEW DRIVE, SUITE 110
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CONTACT: JIM ORR

MAY 15, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970429LCW2	=	0.511 $\mu\text{g/L}$
AMOUNT SPIKED	=	0.495 $\mu\text{g/L}$
PERCENT RECOVERY	=	103

LABORATORY METHOD BLANK

970429BW1E	=	< 0.050 $\mu\text{g/L}$
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CERTIFICATE OF ANALYSIS
MAY 14, 1997

ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
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CONTACT: JIM ORR

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY MATRIX SPIKE % RECOVERY

9701774MS	=	10.1 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.61 $\mu\text{g/g}$
PERCENT RECOVERY	=	95.6

LABORATORY MATRIX SPIKE DUPLICATE % RECOVERY

9701774MSD	=	10.7 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.89 $\mu\text{g/g}$
PERCENT RECOVERY	=	99.0

LABORATORY MATRIX SPIKE DIFFERENCE % RECOVERY

9701774MS	=	95.6
9701774MSD	=	99.0
PERCENT DIFFERENCE	=	3.49

LABORATORY DUPLICATE BLANK

9701811	=	7.61 $\mu\text{g/g}$
9701811D	=	6.77 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	11.7

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BRENTWOOD, TN 37027
CONTACT: JIM ORR

MAY 21, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

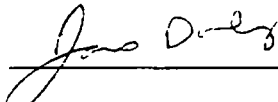
LABORATORY CONTROL SPIKE % RECOVERY

970425LCF1	=	9.38 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.57 $\mu\text{g/g}$
PERCENT RECOVERY	=	98.0

LABORATORY METHOD BLANK

970425BF1E	=	< 0.108 $\mu\text{g/g}$
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Robert E. Wagner, Laboratory Director

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ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

JULY 17, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970708LCF1	=	9.69 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.86 $\mu\text{g/g}$
PERCENT RECOVERY	=	98.3%

LABORATORY METHOD BLANK

970708BF1E	=	< 0.110 $\mu\text{g/g}$
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Robert E. Wagner, Laboratory Director

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ERM SOUTHEAST, INC.

215 CENTERVIEW DRIVE, SUITE 110
BRENTWOOD, TN 37027
CONTACT: JIM ORR

MAY 23, 1997

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

LABORATORY CONTROL SPIKE % RECOVERY

970430LCF1	=	9.85 $\mu\text{g/g}$
AMOUNT SPIKED	=	9.40 $\mu\text{g/g}$
PERCENT RECOVERY	=	105

LABORATORY METHOD BLANK

970430BF1E	=	< 0.103 $\mu\text{g/g}$
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LABORATORY DUPLICATE % DIFFERENCE

9701864	=	3.15 $\mu\text{g/g}$
9701864D	=	3.08 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	2.25
9701877	=	0.350 $\mu\text{g/g}$
9701877D	=	0.297 $\mu\text{g/g}$
PERCENT DIFFERENCE	=	16.4

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Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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